UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Tuesday, July 1, 1930

Crops and Soils Interview No. 42: The Truck in Farm Marketing

ANNOUNCEMENT: Your farm reporter at Washington has been looking into some of the changes in farming and marketing farm stuff. The truck seems to be cutting considerable figure in getting many kinds of farm stuff to market. Your farm reporter has been asking the specialists of the U. S. Department of Agriculture about truck and rail shipments ------- Let's hear what he has to say on the subject --------

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The world does move!

It moves a lot of stuff by truck. I guess everybody realizes that. But I didn't realize just how much farm stuff and what sort was carried by truck until I talked with Mr. Thor Hultgren, the expert in transportation statistics of the United States Department of Agriculture.

He pointed out to me the kind of stuff it pays to haul by truck and some of the changes motors have made in our marketing. And where it is an advantage to use a truck, and when it is the better to ship by rail.

The Federal Trade Commission credits good roads and motor truck with being largely responsible for the considerable shift from small local creameries to big centralized milk plants. The small co-op is not as efficient as the large central creamery compared to what it used to be.

Hauling by truck has also had considerable effect on cooperative livestock shipping associations. Some small shipping associations now have a hard time finding enough stock locally to get car-load freight rates, on account of truck competition. And some association managers have gone into the trucking business.

Trucking, of course, is used more for milk, and livestock, and perishable fruits and vegetables, than for farm stuff where the time element is less important

In fact, more than ninety per cent of all the milk received in such big cities as Milwaukee, Detroit, Cincinnati, Indianapolis, and St. Paul comes in by truck.

In such Eastern cities as Boston, however, rail shipments predominate. Milk shipment figures of the Bureau of Agricultural Economics show that less than ten per cent of Boston's milk is brought in by truck. The reason

for that is that Boston goes far afield for its milk supply. Two-thirds of the milk which reaches Boston from points in Massachusetts comes by truck. So even where rail shipments predominate, trucks have taken over the short-haul business.

Philadelphia, gets most of its milk by truck, especially that comes from Pennsylvania and New Jersey. What other states upon which it draws for milk, rail shipments predominate. Truck rates are likely to rise faster with distance than rail rates. The chief field for truck movements on farm stuff generally seem to be within two hundred miles of the market.

There has been a remarkable increase in hauling livestock to market by truck. That started during the War when shippers were asked to use motor trucks as far as possible for less than car-load lots, in order to relieve congestion on railroad transportation. With the fast increase in roads and motor trucks, the number of drive-ins for Chicago, Cincinnati, Denver, East Saint Louis, Fort Worth, Indianapolis, Kansas City, Louisville, Milwaukee, Oklahoma City, Omaha, Portland, St. Joseph, South St. Paul, Sioux City, and Wichita have increased fast in recent years. Now over fifty per cent of the hogs received at several of these markets arrive by truck.

As Mr. Hultgren says, as a rule, the truck makes the trip in less time for short distances, and offers a more flexible service. Whether to use rail or truck is often largely a question of balancing the added costs of motor transportation compared to shipment by railroad, against the extra service the truck gives.

In most cases, the farmer has to haul his stuff to the railroad station if he ships by rail. The truck picks it up at the door. That saves unloading and reloading into freight cars, and so reduces handling time and expense.

The most economical unit of carrying capacity by truck is smaller than by rail. Therefore, truck owners can afford to offer more frequent service than railroads.

That means more choice as just when to send to market. When you ship by rail, you have to have the stuff at the Station at a certain time. Now then, in case you follow the market by radio, as most farmers do nowdays, and decide that it is advisable to get your products off to market today, you have a better chance to do it where you can call up a trucker and have a truck stop at your place.

"How about this question of shrinkage?" I asked Mr. Haltgren, Some say there is bigger shrink hauling by rail, and others say the truck is worse.

"That," he replied, "is one of the uncertain questions. One man claims one thing, and another something else. The relative shrinkage by rail and truck has not been authoritatively settled yet."

Another advantage trucks have over railroads, for the farmer shipping livestock, is that shipments are made in smaller units. Shipping in smaller loads, there is not so often the need for mixed shipments to make out a car-load. That saves some of the cost of putting partitions in the freight car. Such things as that often serve to make costs by truck and rail more nearly even. It is well to consider such services in deciding how to ship.

That goes whether you ship livestock or milk or fruits or vegetables.

Then there is the question of your protection in case of damage to your stuff in transit. In general, legal liability and financial responsibility are not as great in the case of commercial truckers as in the case of railroads. However, motor-truck transportation is in a generally unsettled condition yet. There are still such wide variations in methods and practices of doing business in various parts of the country, that almost any generalization regarding it is subject to important exceptions. It is not yet clear just what organization of the hauling business will ultimately prevail.

As to the adaptability of truck hauling to various farm products, Mr. Hultgren insists that time is the item of most importance. Products, important for one reason or another to get to market with the least delay, for the comparatively short haul, the truck often offers the best way to ship. A large percentage of fruit and vegetable growers in some sections now ship even such heavy, low-freight-rate commodities as potatoes by motor-truck.

Growers who ship to distant markets, however, can still generally ship more advantageously by rail.

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ANNOUNCEMENT: Your farm reporter at Washington will report to us again tomorrow. These reports are presented by Station ------ in cooperation with the United States Department of Agriculture especially for our farm listeners.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON Wednesday, July 2, 1930

NOT FOR PUBLICATION

Speaking Time:

Poultry Interview No. 42: ECONOMIC LOSSES FROM DISEASES AND PARASITES.

ANNOUNCEMENT: In the last few weeks Your Farm Reporter at Washington has brought you the results of several interviews on ways and means of combating disease germs and parasites that attack poultry. To-day he is going to talk about diseases and parasites again---but this time he talks about them from the economic standpoint. His subject is "Economic Losses from Diseases and Parasites," and now he brings you the facts on this question given him by specialists of the United States Department of Agriculture. All right, Mr. Reporter.....

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The time was when the poultry industry accepted losses caused by parasites and diseases as a matter of course----as something inevitable. If the losses were light it was good luck; if they were heavy, it was bad luck. If you were lucky you had a good year; if you weren't, you didn't---- and so it went.

Now perhaps that time still is in some localities; but as a general rule the element of luck is now pretty thoroughly discredited. Losses from parasites and diseases are no longer playthings of Dame Fortune, but they are within the control of the poultry raiser himself; and the responsibility is largely his.

There are two main reasons for this, in the opinion of Mr. A. R. Lee, Department of Agriculture poultry husbandman. One is the great growth of the poultry industry in the United States. The other is the development of reliable methods by which diseases and parasites CAN be controlled.

An ordinary hen as an individual is not worth a great amount of money. And perhaps this explains why the ailments of the hen were given less attention in the past than the ailments of sheep and hogs and horses and cattle. But the hen has come up in the world in the last few years. She is the working unit in an industry that now ranks third among our livestock industries, being outranked only by dairy products and the hog business.

Now, when you speak of the poultry industry of the United States you talk in terms of billions. American hens collectively lay eggs at the rate of about 760 a second, or 2 billion dozen a year. The annual value of poultry products is considerably above a billion dollars a year, which is 16 per cent of the total livestock production of the country. The United States produces more than one-third of the world's entire supply of poultry and eggs.

So the time is past when poultry diseases can be regarded as of little consequence. Nowadays, we can afford to be careful about the health of our poultry. In fact, we can't afford not to.

Do you remember what happened when European fowl pest was discovered in this country back in 1924? The number of affected flocks was extremely small and the disease was found in only nine States, but the effect was far-reaching. Market prices declined sharply, owing to risk of birds' developing the disease in transit. Normal marketing suffered interruption because of the necessity of disinfecting coops, cars and other equipment. Some poultry-killing establishments closed temporarily, throwing hundreds of employees out of work. In brief, the presence of this infectious disease among a very small proportion of poultry flocks in only nine states had a disturbing influence far greater than its own seeming importance.

"And this illustrates not only the economic importance of disease to the poultry industry itself," Mr. Lee declared. "But it illustrates the intimate relation between our poultry industry, other business enterprises and the public welfare. Obviously, anything that affects a billion dollar industry is bound to have an important influence outside as well as inside that industry."

Take a little different case---- the relationship between tuberculosis in poultry and tuberculosis in hogs. The type of infection found in poultry is transmissible also to swine. So that avian or poultry tuberculosis is not only a menace to the billion dollar poultry industry but to the even higher-valued swine industry.

Dr. John R. Mohler, chief of the Bureau of Animal Industry, and one of the world's best-known authorities on animal diseases, recently emphasized the need of still more attention to diseases of poultry. At Mr. Lee's suggestion, I'd like to quote from Dr. Mohler's remarks:

"The most effective control of poultry diseases," said Dr. Mohler, "must come through poultry raisers themselves, who will employ modern methods and, as occasion warrants, skilled veterinarians. Governmental and State action should aim at the protection of domestic fowls from foreign contagion, to prevent the spread of poultry diseases from State to State, and to eradicate communicable diseases within a State when they appear. Cooperation between states would certainly be desirable, and each State in which poultry raising is important might well establish a competent veterinary poultry service, with skilled workers and research laboratories."

"Tuberculosis is one disease which deserves serious attention of poultry raisers," Dr. Mohler went on. "When infection is extensive in a flock the method commonly recommended is to dispose of the entire flock, clean and disinfect the premises, and restock with birds known to be healthy. On the other hand, when infection is less extensive, the tuberculin testing of fowls is advisable, and is already being used to some extent. It has no bad effects on normal, healthy birds.

"Another serious problem is the control of bacillary white diarrhea of chicks, and the related malady, pullorum disease of hens. The effective control of such infection is complicated by the extent of the baby-chick business, interstate shipments of breeding stock, and other distribution

of chicks and fowls which tend to spread infection. It is because of these conditions that we especially need cooperation among States and a unified organization of State agencies.

"Various poultry parasites, although well known to flock owners, still take a heavy toll," Dr. Mohler continued. "And these losses result to a large extent either from lack of understanding of the best means of control or from not realizing the extent of the damage they cause. The assumption that a large mortality of chicks is inevitable has been disproved both by experiments and by experience.

"For instance, the parasitic worm which causes the condition known as gapes is one of the many poultry pests which cause needless losses. Turkeys are one of the most important sources of gapeworm infection in young chicks, although the turkeys themselves seldom show evidence that the parasite is present. When chicks are reared with turkeys, or on land over which turkeys range, it is difficult to avoid losses of young chicks caused by gapeworms."

Dr. Mohler evidently believes that there is much important work to be done by the National Government and by States and by organized agencies, but about all these agencies can do is to help poultry raisers to help themselves. So real success in reducing losses from parasites and diseases depends primarily upon the people who actually raise the poultry--which means all of you, from backyard poultry keepers to commercial poultry farmers.

Mr. Lee points to the results of grow-healthy-chick programs. Poultry raisers who have followed this grow-healthy-chick practice have proved beyond the shadow of a doubt that a large proportion of the disease and parasite losses are unnecessary. They are raising 80 to 90 per cent of their chicks to maturity now, whereas under their old system they often had 50 per cent and more mortality.

I, myself, happen to know one woman who raised to maturity 498 out of 500 chicks in the summer of 1928, and she did it in a neighborhood where disease was causing great losses. She made this record by following the ordinary common-sense rules of good management and strict sanitation.

You might be interested to know, by the way, that poultry raisers have requested more than one million copies of the Department of Agriculture bulletin on Diseases of Poultry, within the last five years. If you don't have your copy, however, you can still get it. Write for Farmers' Bulletin No. 1337-F. And while you're writing, you may also want to ask for Farmers' Bulletin No. 1524-F, called "Farm Poultry Raising." Send your requests to Your Farm Reporter in care of Station_____ or to the Department of Agriculture in Washington.

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ANNOUNCEMENT: That concludes Your Farm Reporter's report on "Economic Losses from Poultry Parasites and Diseases." Remember----Your Reporter will be back again at this time tomorrow, with his weekly report from the Federal Farm Board.

UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON. Thursday, July 3, 1930.

POSSIBILITIES OF COOPERATIVE MARKETING:

No. 5: Why some Farmers' Co-ops Have Failed.

ANNOUNCEMENT: Through your farm reporter at Washington, Station ------ is cooperating with the Federal Farm Board and the United States Department of Agriculture. Each week now for four weeks we have had a discussion of some of the possibilities of cooperative marketing. Last week, you recall, we laid down the principles followed by successful co-ops. Today, we are going to hear why some co-ops fail. -------- Well, Mr. Reporter? ------

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You know the old saying; "A wise man learns from the experience of others."

Knowing where the other fellows have gone wrong, the wise man avoids making the same mistakes. That applies in this cooperative marketing business, the same as anywhere else.

And thanks to Mr. John Scanlan, of the cooperative marketing division, of the Federal Farm Board, we can know, where the chief troubles have been, with most of the associations which have failed.

Taken by and large, he says, the chief causes of co-op failure have been; mistakes in promotion and organization; poor, inefficient, and untrained management; inherent difficulties in marketing and commodity, and problems traceable to the members.

You see from that fourth cause that this question of co-op failure sometimes comes pretty close home. And I might say right here, Mr. Scanlan bases his findings on a cold-blooded business analysis of the stranded organizations.

But first, let's take up mistakes in promotion. Many farmers' co-ops have finally gone on the rocks, largely because they started out wrong. As Mr. Scanlan points out, just after the World War, when prices of farm products took a precipitous drop from the abnormally high war time prices, most of our big co-ops were organized.

Most of them aimed to get control of a large part of the crop, and then force prices back to where they were before the slump. The promoters painted a rosy picture. They promised big things from cooperation --- extravagant things. They stretched the possibilities of cooperation. They said very little about its limitations. They got that idea of crop control in the heads of members. Farmers were filled up with false hopes before

they joined. Large associations were hastily set up.

Looking back now, it is easy to see that many members were bound to be disappointed with results. The associations couldn't perform the miracles the members has been led to expect. Discouragement and disaster followed. But Mr. Scanlan says we have learned a lot since 1921 and 1922 about what a co-op can and can not do.

Of course, everybody knows another cause of trouble has been poor management. Mr. Scanlan agrees with that, but he doesn't put the blame all on the manager. He reminds us that the management includes the board of directors and the members who elect them. The manager is just the association's hired hand. Of course, general managers have made big mistakes. However, in the last analysis, it is the board of directors acting for the individual members who are the management. Many of the so-called mistakes of the management have been due to inexperience, to the knotty problems to be faced, or at times to the utter impossibility of doing what was expected. Farmers with little or no business experience were called upon to do things which would tax the ingenuity, and ability, and resourcefulness of men well-trained in marketing.

There were sales policies and prices to be determined. Selling, grading, and advertising had to be attended to. In many cases, outlets had to be found for the commodity. The association had to be financed. Advances had to be made to members. Accounts and records had to be kept.

Then in some cases, the trouble was in the farm product itself. Some farm products are harder to sell than others. That may be due to lack of big enough demand. Or it may be due to over-production. Or it may be due to the demand being in the hands of a few powerful organizations, out to kill the co-op if they can.

Heavy production and low prices during the first years of some associations gave them a poor start. Low quality crops had the same effect. Then too, some associations were like the man who was knocked out after he boasted he could whip anybody in the whole State. They just took in'too much territory.'

There you have three chief causes of co-op failures; first, a wrong start; second, poor management; and third, inherent difficulties in marketing certain commodities. The fourth, but by no means the least, cause of failure can be traced right back to the farm house door. Not that Mr. Scanlan puts the blame altogether on the members for failure to support the association. He says when members fail to patronize their association, it may be due to one or more of three main reasons.

The member may be able to get higher prices outside.

The member's dealings with the association may be unsatisfactory.

Or the member may be unable to get payment through his association promptly enough to enable him to meet his financial obligations.

Higher prices paid by outside buyers for the farmer's product may be due to a malicious attempt by outside agencies to break the co-op. Or, they may be due to honest attempts of outside agencies to get enough of the product to meet their needs.

On the other hand, members may lose confidence in their association due to extravagance, or to carelessness in keeping accurate records of each member's account, or to the management's attitude toward the members, or to many other causes. It may be because the member lacks real information about the affairs of his organization, It may be because he doesn't understand the principles of cooperative marketing.

Yet the failure of the member to support the association may be neither his own fault nor that of the management. The financial and economic condition of the farmers in some sections and with some crops make it possible for them to stick by the association. Farmers in other sections have found it almost impossible to market their products cooperatively under the type of association set up. Leadership also is quite a factor in holding members in spite of rough-going.

In the past, many co-ops have failed. Many others have made mistakes, but have survived and grown in spite of them. Few have made no mistakes. Much has been learned about cooperative marketing during recent years. They have been years of experience. Even where associations have failed, Mr. Scanlan says, it is doubtful if the attempt ever was a complete loss. The benefits of experience, and information, and leadership should prove most helpful to future attempts and organizations.

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ANNOUNCEMENT: You have just listened to the fifth of a series of sixteen talks on the subject of the possibilities of cooperative marketing. This time next week, we will have another on "How to form a cooperative association." These talks are presented by this Station_____ in cooperation with the Federal Farm Board and the United States Department of Agriculture. Be sure to listen in on that one next week. "How to form a cooperative association."

UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON Friday, July 4, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Dairy Interview No. 42: A DECLARATION OF INDEPENDENCE FOR DAIRYMEN

ANNOUNCEMENT: This is the Fourth of July, but that makes no difference to the dairy cow. She goes about her day's work regardless of holidays. But she is a sterling patriot none the less, and so we are giving her a place on our program today. Your Farm Reporter at Washington now brings you a report from the United States Department of Agriculture at Washington, which he announces as a suggestion for a dairyman's Declaration of Independence. All right, Mr. Reporter.

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I've always considered dairy farmers, on the whole, as a pretty independent bunch. True it is that your work is a year-around grind which recognizes no holidays and no vacations. But on the other hand they are not so dependent on the good will of the weather man as many other farmers. And for another thing the dairy markets may have their ups and downs, but they do not undergo the prolonged slumps that sometimes strike other industries.

However, there is one form of tyranny to which Dr. J. C. McDowell, veteran Department of Agriculture dairy husbandman, finds that the dairy industry still pays heavy tribute. And that, he says, is the tyranny of the low-producing boarder dairy cow; the cow which exacts tribute in the form of food and lodging, but which gives no profit in return.

One hundred and fifty-four years ago today our forefathers signed a document which was destined to bring forth the greatest nation of the modern world. What would happen, do you suppose, if dairymen of this nation should follow these illustrious footsteps in dealing with the scrub cow? Suppose that today we all mentally sign a declaration of independence from the low-producer? Dr. McDowell believes the results would be almost as revolutionary to the nation's dairy industry as the event of 1776 proved to be for the world.

There would be bloodshed, of course, just as there was in the brave days to which we now look back with reverence. Hundreds of thousands of low-producing cows would go to the block, martyrs to the cause of progress and prosperity. "Millions for profitable production, but not one boarder cow for tribute!"; all cows should have a chance to prove their right to eat our feed and sleep in our stables; then if they fail, they must pay the

price of failure.

This system may not be so democratic as our present system; but it would undoubtedly be far more profitable.

Dr. McDowell suggests that our motto be: "Not just more cows, but more better cows." Why? Because, he declares, it is the high producing cows that make the income climb.

And if there remains anyone to question this, he is well prepared to prove it beyond reasonable doubt.

Take, for instance, the reports on the yearly production of more than 200,000 cows from dairy herd improvement associations through-out the United States. These 200,000 cows were grouped according to production; cows producing from 75 to 124 pounds of butterfat inclusive were put in the 100-pound class; cows producing 125 to 174 pounds were classed as 150-pound producers and so on.

The records show that 100-pound producers returned to their owners an average of $15 income above feed cost; 150 poundproducers, $39; 200 pound producers, $63; 300-pound producers, $113; 400-pound producers, $164; and 500-pound producers, $214.

Thus, he points out, 1 cow in the 500-pound group brought in more income over feed cost than 14 cows producing 100-pounds each. And who wouldn't prefer to milk one cow every day rather than 14 -- for the same money?

"And here's another way to look at it," said Dr. McDowell. "That one cow puts only 500 pounds of butterfat on the market. The 14 cows put 1400 pounds on the market. So there are 900 pounds of butterfat for which the farmer does not get 1 cent of profit. This extra 900 pounds merely swells the surplus. Now perhaps low-producers do not cause the surplus; but we can be sure of this: eliminating low-producers would eliminate the surplus, and eliminating these cows wouldn't make anybody any poorer.

"Or you can put it still another way; in fact, you can look at it anyway you like and the results are the same. The records show that the 100-pound producers ate 42 cents worth of feed for every pound of butterfat they produced. The 300-pound cows produced a pound of butterfat on 23 cents worth of feed, and the 500-pound cows on 20 cents worth.

"Obviously, when a cow eats 42 cents worth of feed for every pound of butterfat she produces, and when butterfat is selling for 30 to 35 cents a pound -- she isn't making her owner rich very rapidly.

"The cows that produce a pound of butterfat at a feed cost of 20 to 25 cents are the ones that really make the income climb.

"Registered cows," he added, "make the income climb a little faster than grades, according to the records. On the average, they have produced around 11 per cent more milk and 9 per cent more butterfat per cow, and they have returned 15 per cent more money above cost of feed."

I inquired if there was any difference in breeds.

He replied that from the standpoint of profit there was not. "All of our records," he told me, "show that there isn't any so-called 'best' breed. It is the cows within the breed that count. There are high-producing individuals in all breeds; and there are many cows in all breeds that do NOT make the income climb. Regardless of breed, and regardless of whether cows are grade or registered, the low producers must be weeded out."

"And now about that declaration of independence," I put in. "How far would it pay us to go? How many cows can we eliminate without cutting in to our profits?"

Here is Dr. McDowell's answer; and it is an answer based on facts and figures and on many years' experience as chief of the dairy herd improvement work of the Department of Agriculture:

"If it were possible to eliminate the lowest-producing 30 per cent of the dairy cows in the United States," he said, "the remaining 70 per cent would make as much profit as all of them are now making.

"With all the culling that has been done in Dairy Herd Improvement associations, you can still cull out the lowest 10 per cent remaining, and you will be culling none but unprofitable. cows.

"These low producers are not the ones that make the profits in the dairy business. To eliminate the highest producers from any group would be fatal, for they are the ones that make the income climb.

"Our records on hundreds of thousands of cows show conclusively that income over feed cost rises with production. Regardless of the reason--regardless of breeding, culling, feeding, what-not----when production has gone up, income over feed cost has gone up.

"That's why I say: Let our motto be "Not just more cows, but more better cows." And that's why I believe a declaration of independence from the scrub cow is a long step toward prosperity and larger profits."

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ANNOUNCEMENT: That concludes Your Farm Reporter's Fourth of July dairy talk on a Declaration of Independence for Dairymen." He has asked me to tell you about a new Department of Agriculture publication entitled "Dairy-Herd-Improvement associations, and Stories the Records Tell." The number is Farmers' Bulletin No. 1604-F. You may get copies of this bulletin by writing to Station_____or to the Department of Agriculture in Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. Monday, July 7, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

WHAT IS THE CHEAPEST LIVESTOCK FEED ?

OPENING ANNOUNCEMENT: "What's the cheapest livestock feed ?" That's the question your Washington Farm Reporter is going to try to answer at this time. Since that's such an important question, I'm going to pass over the "mike" and put Your Reporter on the air right now.

--ooOoo--

Well folks, now that the Fourth of July is over I'm going to try to answer a question that an Alabama farmer asked me in a letter the other day. Here's the question.

"WHAT IS THE CHEAPEST LIVESTOCK FEED?"

I wonder what your answer would be to that question, and what you consider the cheapest livestock feed on your farm.

Anyway, in order to get the latest information on that subject, I went over and had a talk with Mr. H. N. Vinall, one of the pasture investigators in the United States Bureau of Plant Industry. Mr. Vinall came out of Kansas and took up his work with Uncle Sam nearly a quarter of a century ago, and ought to be well qualified to talk on the subject of pastures and the feeding of livestock.

I asked the pasture investigator if he could answer the question-------- What is the cheapest livestock feed?

"Yes," he said, "I could use two words and answer that question to my own satisfaction perfectly, and I believe that 99 per cent of the farmers would agree with my answer, but in order to avoid any kind of a controversy on that important question, I'll just give you the information, and then perhaps you can answer the question yourself."

With that statement the pasture investigator began to pull papers, bulletins, charts and pictures from his desk while I glanced around at the pasture pictures in his office and wondered about the two words that would answer this important question. Glancing over an important looking chart Vinall said,

"Here's some interesting news from the State of New York. In a farm cost study in that State it was found that the expense of maintaining a dairy cow on a good pasture amounted to ten cents per day and this included the cost of a supplementary feed while the cow was on pasture. The cows in this particular experiment produced 34 cents worth of milk per day, and that left a profit of 24 cents per day per cow while the cows were on pasture. The cows in this particular experiment produced 34 cents worth of milk per day, and that left a profit of 24 cents per day per cow while the cows were on pasture. From 1923 to 1927 the cost of producing farm crops in New York State amounted to $40 per acre, and the final returns for the crops amounted to $41 per acre. That was an income of one dollar per acre for the crops. Compare this with the returns from dairy cows which while getting most of their feed from pasture, returned an income of $11.37 per acre."

I thought I'd trap Vinall so I said, "I don't suppose you have any figures for the southern part of the country where they can pasture practically the year-'round."

"Oh, yes, I have," he replied. Pointing to a picture on the wall he said, "That represents a pasture experiment down in Florida. Native steers on an improved pasture in Florida returned a net income of $7.82 per acre, and I want to emphasize the word IMPROVED pasture because there is a great deal of difference between IMPROVED pasture, and just plain pasture.

Vinall was a splendid biter so I kept fishing.

"What about the Corn Belt?" I asked. "Have you got any pasture and feeding information for that great agricultural section of Uncle Sam's Domain?"

"Yes," he answered. "In a survey conducted on 500 Corn Belt Farms, the breeding cows obtained over half of their yearly feed from pastures. This pasture feed cost only $8.50 per animal."

Every time I tried to corner Mr. Vinall on this pasture feeding question, he stepped right on top of me getting out. In desperation I said, "Well, I don't suppose livestock producers in North Dakota and the Range Area ever give much thought to pasture."

"Yes they do," came the positive answer from Vinall. Continuing he said, "An experiment was carried on at Fargo, North Dakota, to determine the pasture value of sweet clover. Steers pastured on sweet clover made an average gain of nearly two pounds per day per steer for a pasture period of 110 days. The second summer of this experiment the gain was 1.86 pounds per day per steer, and the pasture period lasted for 95 days."

By this time I was convinced that pasture is the cheapest source of livestock feed, but I wanted more information so I asked about the different kinds of pastures and the value of the improved pasture as compared to the ordinary piece of land with a fence around it, and called a pasture.

"Well," said Vinall, "a pasture is like most other things ----------

it's just what you make it. Different pasture plants thrive and do well in different sections of the country, but there are enough pasture plants to take care of the more than six million farms in this country, if their owners really want to go to the trouble of making a first class pasture. After such a pasture is made it becomes one of the cheapest sources of livestock feed. Generally speaking, meat produced on bought feed, costs 3 or 4 times as much as meat produced on pasture."

At this point in the interview I asked Mr. Vinall if it really paid to fertilize and take care of pastures.

"Yes it does," he replied. "Hillside pasture land in Ohio produced in a test, 59 pounds of beef per acre per year. The same kind of pasture treated with 3,000 pounds of ground limestone and 400 pounds of acid phosphate per acre, produced 136 pounds of beef. That was a gain of 77 pounds of beef from a treatment costing approximately $7 per acre, and of course the effect of the one application will continue for a period of at least four years."

Picking up a bulletin from his desk Vinall said, "Here's a report that shows the value of using fertilizers on a pasture. A test pasture in Connecticut produced on an average of 75 pounds of beef per year, per acre of pasture. The same pasture was treated with one ton of ground limestone, and 500 pounds of super-phosphate. After that it produced an average of 187.5 pounds of beef per acre. Treating that particular pasture gave an increased gain of 112 pounds of beef per acre."

Mr. Vinall said that it cost about seventy cents per acre to furnish the necessary labor to take care of a Pennsylvania pasture. Of course, that cost did not include taxes, nor interest on the investment in land, fences, etc. It has been found that the labor cost of producing a ton of digestible nutrients in a corn, oat, wheat and clover ration amounts to $15.94 while on pasture---the labor required costs less than seventy cents.

According to Mr. Vinall weeds should be kept out of pastures, and mowing is generally the easiest way to handle pasture weeds, provided the mowing is done at the right time and in the right way.

Now let's go back to our original question---What's the cheapest livestock feed?

Good pasture. Those are the two words I would use in answering that important question.

Well folks, I've answered the question for the Alabama farmer, and now there's another train coming into the block, so I'll have to pull out and give room for somebody else.

If you want information on making a new pasture, improving the one you already have, or if you need help in solving your pasture problems, see your county agent, consult your State College of Agriculture, or write directly to the United States Department of Agriculture in Washington, D. C.

CLOSING ANNOUNCEMENT: You have just listened to one of the regular Farm Reporter programs broadcast from Station_____ in cooperation with the United States Department of Agriculture. Write your own State College of Agriculture for information about pastures for your particular section.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service

YOUR FARM REPORTER AT WASHINGTON. Tuesday, July 8, 1930

Crops and Soils Interview No. 43: Corn-Pickers.

ANNOUNCEMENT: Your farm reporter at Washington will now give us the results of his most recent talk with specialists of the United States Department of Agriculture. They have been telling him about corn pickers. There are corn-pickers and corn pickers------- Which kind were you talking about, Mr. Reporter?

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Every year we hear more and more about corn pickers. That is, we hear more about mechanical pickers. But, in most localities, the champion corn husker is not yet run out of the field by the machine.

From what I gather, from talking with Mr. G. A. Cumings and V. M. Hurst, farm machinery engineers of the United States Department of Agriculture, there is still need for both human and mechanical pickers. That doesn't mean there is room for them both in the same field. Some places it pays best to pick and husk by hand. In others, the machine is the most economical.

The machines are being improved right along. They are taking the place of more and more hand huskers. If you tried to draw a line between farms where mechanical pickers work best and those where hand husking still holds the advantage, you wouldn't draw the line, the same place you would have a couple of years back. Corn-pickers are being made lighter and with a power take-off drive. Some of them now can go most any place a team and wagon can go.

Most of the mechanical pickers now in use are one-row machines.

Mr. Hurst says, however, that the tendency is toward the multiple-row machine.

Of course, it is the same with corn-pickers as with any other farm machine. Whether they are more economical to use than to gather and husk by hand, is largely a question of how much corn you have to harvest. As Mr. Hurst points out unless you have a big acreage or can use the picker for custom work in the neighborhood, the depreciation and interest on the investment in the machine may amount to too much to the acre to make mechanical picking profitable.

He says that most of the farmers using the machines have a hundred or more acres in corn, but that they have been used successfully on less than one hundred acres.

The cost is not the whole thing. There are several advantages in using a corn picker. There are also some disadvantages. Mr. Cummings and Mr. Hurst discussed those advantages and disadvantages back and forth, as I sat there and listened.

You know, the corn-picker business took on new life during and after the World War. The lack of labor, and the high wages demanded, and the fast growth of power farming, and the desire to get the corn out of the field quickly are the chief things which led to the present development in picking and shucking corn by machinery.

Mr. Cummings and Mr. Hurst agreed that the first advantage of the machine is that it makes the farmer more independent of farm labor. They compared it to the use of the combine in wheat harvesting.in that respect.

In fact, when they got to talking about the way the corn-picker not only cuts down the need for extra huskers but cuts out the drudgery, they spoke with feeling. Many of you will agree with Mr. Hurst: that it is no fun to get your hands all cracked to pieces, tramping through a corn field, for long hours in freezing weather.

Another advantage of the mechanical picker is that it speeds up the harvest. It enables you to take advantage of weather conditions. It does the work faster. It does in a week or ten days, as much as the hand-husker will do in about six weeks. That is figuring that an average man will do an acre and a half a day, and a one-row machine will do from six to ten acres a day, depending on conditions. One picker will do as much as six men. The savings with a two-row machine are even greater.

In fact, many farmers have turned to the mechanical picker as a means of cutting costs. You see, with the old system of paying hand-pickers, say seven or eight cents a bushel, for gathering the corn, costs go up steadily right along with the number of acres, to be harvested. With a mechanical picker, however, the depreciation and interest charges on the machine go on just the same whether it is used on a small acreage or a big one. Those costs are the same, so each additional acre on which the mechanical picker is used helps cut the cost per acre of gathering and shucking the corn.

However, as Mr. Cumings and Mr. Hurst both admit, there is some disadvantages.

In the first place, for farmers who have only a small acreage, the first cost of the machine may be too high for it to pay them to use it. It is probably cheaper to stick to hand pickers when possible, unless the acreage is fairly big or unless the owner can get jobs on other farms enough to spread the costs over a big acreage.

Another disadvantage, used to be that the machine pickers were not so well adapted to use of muddy or soft ground. However, Mr. Hurst says, the machinery people have gone a long way toward doing away with that disadvantage. Former

ly with bull wheel traction, the wheels would get bogged up in soft ground. Now, however, with the power take off, the picking and husking machinery gets all its power by direct connection with the tractor. There are no gears or sprockets or anything on the wheels. The wheels serve simply as wheels, like those on a wagon. In fact, some of the pickers are now made not as trailers to the tractor, but to fit on the tractor itself.

Built lighter and with the power take-off, Mr. Hurst says the mechanical corn pickers now can go in almost any field, in which you can use a team and wagon easily. The machines have also been improved to do a more thorough job in picking up stalks that are lying over and to do a clean job of husking.

One disadvantage, Mr. Cumings thinks, is that the mechanical picker drags down the corn stacks. This applies only where livestock go into the fields for roughage feed during the winter months. The actual loss, however may be comparatively small. Under certain adverse and extreme conditions the mechanical picker does not get all of the ears, but the same thing might be said about hand picking by hired labor. Where the stalks are broken over and the ears are heavy the stalk may snap off at the break rather than pass thru the snapping rolls. This loss is not considered serious under normal conditions or where live stock are turned into the fields. Pickers are constantly being improved and are better adapted to extreme conditions.

Mr. Hurst points out that even with hand huskers there is some loss of that kind. The man who pitches the corn clear over the wagon, can't afford to stop to pick it up.

From what these two engineers say, however, it would seem that where corn acreage is fairly large, our old hero, the champion corn husker, can't keep up. But on many small farms the cash outlay for a tractor and picker is just too much for the farm budget.

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ANNOUNCEMENT: Station_____cooperates with the United States Department of Agriculture in presenting these reports, such as that to which you have just listened. Your farm reporter at Washington visits the scientists of the Department and then passes on to us what they tell him. In this way, radio is helping connect the farmer directly with his own experts.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service

YOUR FARM REPORTER AT WASHINGTON Wednesday, July 9, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Poultry Interview No. 43: CAPONS versus BROILERS AND ROASTERS

ANNOUNCEMENT: And now here's another poultry report from Your Farm Reporter at Washington. He's going to talk today about a very timely question. The question as he puts it, is "Capons versus Broilers and Roasters." And here he is to tell you what he's learned about it.

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To caponize or not to caponize; that is the question.

Or rather, the real question is how to dispose of surplus cockerels to best advantage. Shall cockerels be marketed as capons or as broilers and roasters

The answer to these questions depends on several things, according to our Department of Agriculture poultry friend, Mr. A. R. Lee.

"Early cockerels," he pointed out to me," have usually been sold at good prices as broilers; while later-hatched cockerels come on the market when broiler prices are usually comparatively low; and thus these late cockerels may often be caponized to good advantage.

"Whether it is better to raise these cockerels for roasters or capons," he said," depends largely on the market you have for your product. Naturally it would be gambling to raise capons at any time unless you are assured of a profitable market for them."

"In general, you can say this: If chickens are to be sold before the first of January it does not pay to caponize. But if they can be held to January or February, capons are usually profitable. This of course means that a good range and plenty of house space must be available. The cost of raising capons under confinement is too great to make it profitable.

"What are the advantages of caponizing?" I asked.

"Well, as you know a capon is, an unsexed male bird," he replied. The capon to the poultry dealer is what the fat steer is to the beef packer-- the source of the choicest food product of its kind. Thus, the purpose of caponizing is to produce a bird that will make a heavier carcass with sweeter, juicier and more tender meat than male birds that are permitted to grow normally."

"Any of the general-purpose breeds or heavier breeds make excellent capons," he went on." Plymouth Rocks, Rhode Island Reds, Wyandottes, Brahmas, or Jersey Black Giants are all suitable for the purpose. And some poultrymen caponize Leghorns. However, I wouldn't recommend this unless the particular strain of Leghorns happens to be an especially heavy one and they are produced for a market that especially demands them. The Leghorn is not primarily a meat breed and it is not built to add weight as efficiently as the heavier breeds.

"Remember, caponizing is never advisable unless the extra gain in weight is sufficient to justify the extra expense of caponizing."

"Ordinarily, capons will bring from 8 to 12 cents a pound more than cockerels that are sold as roasters---and sometimes more than this if a high-grade market is being supplied."

"The capon grows much heavier too, doesn't it," I put in.

"Well," said Mr. Lee," you might think so if you believed some of the advertisements. You'll frequently see a picture of a great big capon weighing from 12 to 14 pounds contrasted with a moderate-sized cockerel weighing 6 to 9 pounds. From this you are led to assume that there is a tremendous difference in weight between cockerels and capons at the same age. However, this assumption is not borne out by the facts.

"Experiments by the Department of Agriculture and by State experiment stations show that capons and cockerels weigh about the same up to 6 or 7 months of age. From that time on, the capons gradually begin to outweigh the cockerels. However, the difference in weight, even at 9 to 10 months, is not very great.

"The advantage of caponizing lies largely in the better quality of capon flesh, rather than quantity. And also from the fact that the birds are more docile and will fatten more readily than cockerels."

I asked Mr. Lee about the best time to caponize.

"Probably the best season is early summer," he replied. "That is, when the young cockerels weigh around 1 1|2 or 2 pounds, and are 2 to 3 months old.

Now, as to the caponizing operation, Mr. Lee told me it was not particularly difficult, but that it did require great care and practice. He declared that the most important item in a successful operation is to starve the bird properly beforehand. Cockerels should be starved for 36 hours before caponizing, and should receive no water to drink for at least 12 hours before.

Probably the next most important item is to have a good set of caponizing instruments. And for the details of the actual operation let me refer you to Farmers' Bulletin No. 849-F, called "Capons and Caponizing." This bulletin is well illustrated and gives detailed instructions, and I'm sure you will find it very valuable.

AFTER the operation, Mr. Lee explained, birds should be confined in a pen by themselves and should be fed on soft feeds, such as a wet mash, not sloppy but crumbly.

Keep them by themselves for about 10 days or 2 weeks, so that other birds will not disturb them and hinder their recovery. It is important that they recover from the operation satisfactorily, else they will not make sufficient gains to justify the trouble and expense.

Confining them for this period also enables you to examine them and to treat them for wind puffs, should these puffs appear. All that is necessary is to puncture the puffs with a knife and apply disinfectant to the wound. It may be necessary to do this a second time as wind puffs sometimes form twice.

After the two-week period is up the capons may be run with the rest of the flock and fed the same as other growing chicks. They require no special care or feeding during the growing season.

Capons are usually kept until they are about 10 months old. At this time the market is at its best and the birds have made their most profitable gains. You'll find suggestions on feeding, and killing and dressing and so on in Farmers' Bulletin 849. Let me know if you want copies of this bulletin.

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ANNOUNCEMENT: Your Farm Reporter at Washington has just brought you his weekly poultry report from the United States Department of Agriculture. If you want that bulletin on "Capons and Caponizing," Farmers' Bulletin No. 849-F, write to Station_____or to the Department of Agriculture in Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. Thursday, July 10, 1930.

POSSIBILITIES OF COOPERATIVE MARKETING:

No. 6: How to Form a Cooperative Association.

ANNOUNCEMENT: Today we are to have the sixth of our series of sixteen talks on the possibilities of cooperative marketing. This series comes to us from the Federal Farm Board and the United States Department of Agriculture through your farm reporter at Washington. During our last two talks, you recall, we learned from successful and unsuccessful co-ops some of the things to do and to avoid doing. Now we are down to the question of forming a co-op. How should we go about it, Mr. Reporter? ---

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Now that we have a pretty good line on what a successful co-op is like, we come to this question of how to go about forming one.

Let's just consider ourselves as one group of farmers figuring on starting an association in our community. And let Mr. B. B. Derrick, in charge of the extension work of the Federal Farm Board, give us a few suggestions on what to do.

A cooperative association is not an end in itself, but a means to an end. As Mr. Derrick says, the first thing to do is to find out whether we really need an association. That is not so much a matter of the way we feel about it, as it is a question of cold, hard facts.

Will it be possible to cut the present costs in assembling and grading and packing our stuff? Will we be able to save on transportation, and warehousing, and selling through a cooperative association? Have we local leadership with enough knowledge of the particular product we have to sell to take on the responsibility of organizing and directing the co-op.

Few, if any, of us can answer such questions off-hand. Mr. Derrick suggests we get in touch with the County Agent and the State and Federal Research and Extension people. They will help us determine the need.

Suppose we do need a co-op. Suppose we do have the men who can get behind this thing. Then the question is; Can we get enough business? Will our association have a reasonable chance of getting big enough volume to increase our bargaining power and cut the market

costs compared to what they are now? The Extension men and other educational forces will help us make a survey to find that out.

In case we can't get enough, it may be to our advantage to join up with some other co-op that is already set up. It is perfectly plain, if there are too many associations in any territory, the least efficient ones are doomed to disaster.

Mr. Derrick thinks that many co-op failures in the past could have been averted, if the organizers had looked these questions squarely in the face at the start. Even if there is enough business if we got it all, we should hear in mind we can't expect to get it all. It will be a long time before any farmers' co-op is ever able to get 100 per cent of the business in its territory. How much is actually available? That's the question.

Say, with the help of the experts, we find we have the need, and the volume, and the leadership. The next thing is to get a good manager who knows the commodity our association will handle. Some associations have paid dearly for the education of inexperienced managers. Organization can't take the place of efficient management. Mr. Derrick says, Never hire a poor general-manager because he is cheap. Good management is worth all it costs, if due consideration is paid to getting our money's worth. The Extention and other agricultural forces may help us find a manager who knows selling methods and markets in our commodity.

Then there is the question of money. No matter how small the beginning, Mr. Derrick insists, we should develop plans to obtain adequate working capital with provisions for reserve funds or a surplus to meet unforseen emergencies.

The amount of capital needed, depends on the kind of business. A milk association, where there is a quick turn-over and frequent settlements, might need less capital than a grain organization where the crop may be carried almost a year. The Extension and other educational forces which know the results of studies of co-ops in different lines in different parts of the country may be able to tell us about how much capital we will need for our co-op handling our kind of stuff in our part of the country.

There may be plenty of need for a co-op. There may be enough business around about to keep it going. We may be able to get a good manager, and enough to finance the association properly. But we may strike rough going soon, if we don't consider the members generally right from the start or before.

Of course, in drawing up the papers for the association, we had better see that it meets the requirements of the Capper-Volstead Law and the Agricultural Marketing Act. We want to be sure our co-op will be farmer owned and controlled and will stay that way.

Mr. Derrick points out, however, that it may be necessary first of all to get in the minds of our farmers the main aims and purposes of our co-op. He believes in not only pointing out the possibilities, but also the limitations. We can't expect to get all the business in our community. He is not much for this camp-meeting style of forming a co-op. Too often,

he says, he has seen farmers in a meeting shouting "Aye," "Aye" to every proposal, and then next day having a mental relapse and wanting to back down.

He thinks we will get further in the long run, if we stick to a select member policy. By that, he means we don't want every producer unless that producer is financially able and cooperatively minded enough to market through our association.

In some cases, farmers have their production credit tied-up with the crop. They are compelled to sell as soon as possible outside of the association, to meet their obligations. There is no use signing up a man, whom you know can't deliver.

Then there is the past reputation of the prospective member to be taken into consideration. We want members who have shown by their moral responsibility in past community efforts that they are good cooperators.

And if the member is not able to see his way clear to sell cooperatively, Mr. Derrick says he should not be held up to public ridicule.

Then another thing we should provide for in forming our co-op and that is to arrange so that members can get market information. They need as complete a market picture of the commodity as possible. The County Agent and other educational agencies will help analyze the market information so members will be better prepared to correctly judge the sales policies of the management.

Our new association can get help from the college people and extension men in getting a system of accounting and record keeping which will be uniform with other associations handling our commodity. The records should speak the same language, so it will be easier to compare the work of one association with another and locate troubles and iron our difficulties.

It may also be well to bear in mind the possibilities of affiliating our association with other associations in a regional or national chain of co-ops with a central selling organization.

Remember the chief things to bear in mind in forming a co-op are; First, the association must be needed; Second, it must have adequate volume of business. Third, it must have good management. Fourth, it must have enough capital. Fifth and Sixth it needs informed members, a select member policy, and market information, available to members and prospective members.

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ANNOUNCEMENT: We have just heard how to form a co-op as outlined by Mr. B. B. Derrick, in charge of extension for the Federal Farm Board. The responsibilities of members and directors of co-ops will be the seventh of this series of sixteen talks on the possibilities of cooperative marketing. Station_____acting together with the Federal Farm Board and the United States Department of Agriculture will present Number Seven at this time next week.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, July 11, 1930.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Dairy Interview No. 43: DEVELOPMENTS IN CHEESE MARKETING.

ANNOUNCEMENT: And now here is Your Farm Reporter at Washington, again, to bring you reports fresh from the United States Department of Agriculture. Today is his day with dairy farmers; and for today's interview he has gone to the Bureau of Agricultural Economics. He brings you now a report on developments in cheese marketing, as he learned about them from Mr. Walter J. Venske, a Department economist. Let's hear what you've found out, Mr. Reporter.

--ooOoo--

One of these days some enterprising young man may write a book about the "Romance of the American Cheese Industry." I hope he does; I think it should make a very interesting book. As such books go, it ought to be a best-seller. I'm sure it would tell us a good many things that most of us hadn't known or hadn't thought about.

Just take for instance the price of cheese. As a popular expression "the price of cheese" is famous; but how many people -- how many of you dairymen, in fact -- know how the price of cheese is established from week to week? And how many of you know how our present system developed?

This would make a lively story in itself, and I want to talk about it in a minute. But first let's turn back with Mr. Venske and review our history for a moment.

Mr. Venske told me that the American cheese business in the United States-- remember, we're speaking now of American cheese -- started in New York, back in the middle of the last century, but soon spread to Wisconsin. For many years now, the industry has been centered in Wisconsin where there are approximately 2,000 factories producing around 69 per cent of all the American cheese made in this country. Two or three years ago the percentage was even higher than this. But within the last few years more and more Wisconsin milk has been sold as fluid milk. Cheese production has declined slightly, and other sections have been taking up the slack. The industry has been spreading out -- spreading to the South and to the West, especially. Undoubtedly one of the most interesting possibilities of the next few years will be the way the South develops its newly-found industry.

I might add, since Mr. Venske remarked about it, that you might also watch the Far West. Take the Tillamook valley of Oregon for example. In that valley are 25 cheese factories, operated under a cooperative arrangement. They market their cheese cooperatively under their own brand, and their success has an outstanding feature of the industry's recent expansion.

However, if you want to study developments in the marketing of American cheese you almost have to go back to the State where the industry has thrived the most.

"As goes Wisconsin, so goes the country," is still pretty true of the American cheese business.

Mr. Venske first pointed out some traditional differences between methods of marketing butter and methods of marketing cheese. Cheese is NOT shipped direct to the big wholesale markets, as butter is. Instead, it is assembled by so-called assemblers, men who usually operate strings of warehouses. These assemblers commonly send out trucks to haul the cheese into their warehouses -- and there they grade it, paraffine it, and then store it, or sell it immediately.

Another distinct difference is that a large part of the cheese produced is cured and stored right in the producing centers. On the other hand, butter is stored at CONSUMING markets, for the most part.

Now, how is the price of cheese determined? If you have lived in the city of Plymouth, Wisconsin, you may know all about the price of cheese. But if you haven't, the chances are that you don't.

You understand that in speaking of price quotations here we're talking about prices paid the cheese factory, not wholesale price or retail price. Mr. Venske told me that the quotations on which cheese is bought from factories are established on two so-called cheese "boards," both of which are located in the same city, Plymouth, Wisconsin. These quotations govern the basic buying price of American cheese not only in Wisconsin, but throughout the country.

"Some years ago," Mr. Venske said, "almost every cheese town in Wisconsin had its own cheese board. The factory men would come in with their cheese and sell to the highest bidders. However, in the last 10 to 15 years the number of boards has dwindled rapidly, until there are only two left. They are the Wisconsin Cheese Exchange, and the Farmers' Call Board.

The Exchange, which is the more important of the two, is often referred to as the dealers' board; the members are all cheese dealers or representatives of firms manufacturing package cheese, commonly known as process cheese. This board establishes the quotations on the large styles: Flats, Twins, Cheddars, and Daisies.

Now, the "board" itself is nothing more nor less than a common blackboard, marked up with white lines. On the left side are listed the cheese concerns offering cheese for sale. On the top and across, are the different styles; such as Twins, or Daisies. When a dealer offers cheese for sale, his offer is written

opposite his name and directly under the style he offers. Finally, there is an auctioneer, whose duty is to sell this offering to the highest bidder. The price at which the largest quantity of any style is sold becomes the quotation. In the event of no sales, prices of the previous week carry over.

Both of the boards, by the way, meet on Fridays, and the quotations thus established stand as the basic buying prices for cheese during the following week.

The members of the Farmers' Call Board are representatives of cheese factories and dealers, but only the factories are allowed to sell cheese on the board; the dealers being buying members only.

Quotations on this board govern the basic buying prices for the so-called small sizes of cheese: such as Young Americas, Longhorns, Square Prints and the 5-pound Loaf.

Mr. Venske explained that cheese dealers aren't bound by quotations established on these two Boards, but that the quotations merely serve as a basis for buying operations.

Well, so much for the matter of price. I've given you a rather sketchy picture, but it may help to give you some idea of the present system, which has developed through a process of evolution.

Now let's take a brief look at two other developments Mr. Venske mentioned. One is the processing of cheese, which was begun about 10 years ago, in 1920.

In case you don't already know it, this is a blending process. They take different grades of cheese and blend them together; and thus they are able to produce a uniform product the year around.

The cheese trade estimates that from 30 to 50 per cent of all original American type cheese is now processed, Mr. Venske told me. This means around 140 million pounds a year.

Another recent development is found in the number of mergers occurring within the last few years. Not only are factories merging, to form larger factories, but assemblers and processors as well are combining to form larger organizations.

Now, my time is up. If any of you would like to get further details on any question this report may suggest to you, write to me in care of Station_____, or write direct to the Division of Poultry and Dairy Products, Bureau of Agricultural Economics, U. S. Department of Agriculture, in Washington, D. C.

--ooOoo--

ANNOUNCEMENT: That was Your Farm Reporter at Washington, reporting to you on the subject, "Developments in Cheese Marketing." This concludes Your Reporter's radio chats for this week, but he'll be with us again Monday, at which time he will have a fresh batch of timely information for livestockmen.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. Monday, July 14, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

WHAT'S THE BEST TIME TO CUT HAY?

OPENING ANNOUNCEMENT: What is the best time to cut hay? That's the timely subject your Washington Farm Reporter is going to discuss at this time. The green light has flashed, so I'll put the Reporter on the air, and let him start the program.

--oOo--

While I was sitting at my desk the other day a messenger walked in and handed me a telegram which read:

Please broadcast some information on the best time to cut hay."

That message was from a farmer in the upper part of the Mississippi Valley where they make hay while the sun shines * * * and I knew that he wanted as definite facts as possible. But he had asked for information which depended to a large extent on the kind of hay he was raising and he did not mention that in his telegram. So I had to give him what you may call a "buck-shot" reply. By that I mean I told him enough to cover plenty of territory in much the same way that a load from one of my shot guns hits every ring in the target as well as the bull's eye. I had to mention the general principles involved and sent him 8 different bulletins on 8 different kinds of hay ranging from alfalfa to Johnson grass. No doubt a good many farmers and stockmen are now facing this same problem, so I shall mention the results of my consultations with three important branches of the Department of Agriculture, one of which gives special attention to forage crops, another to feeding livestock, and the third to the grading of hay. You will be as much interested probably as I was to learn that those three separate divisions of the department practically agreed on the essential point as to the time of cutting hay.

I'll tell you what that big point is in just a minute. Right now I want to tell you some of the interesting things I found out from Dr. A. J. Pieters in charge of Uncle Sam's forage crop division.

Alfalfa is the principal hay crop west of the Mississippi River, and in a few other scattered sections. Red clover and timothy take first place in the northeastern section of the United States, while the southeast gets splendid hay crops from lespedeza, cowpeas, soybeans and Johnson and Sudan grasses. In addition to the ones I have mentioned, there are still other hay crops scattered throughout the country, and even an overlapping of the sections.

Now for the question-----What's the best time to cut hay?

"Well," said Dr. Pieters. "That depends on what you want. If you want a hay that is high in protein, and high in water content, then it will be necessary to cut the hay while it is young and juicy, and before it dries up. On the other hand, if you are cutting a legume hay such as soybeans and want the value of the oil in the beans, then it will be necessary to sacrifice some of the early tenderness in order to get the increase in beans and oil."

Pulling a bulletin from his bookcase, Dr. Pieters said, "Sometimes insect and pest troubles help decide the best time to cut hays. That is true of red clover in some sections of the country. The clover-flower midge lays its eggs in the head of the red clover, and if these eggs are allowed to hatch, and the little worms are allowed to fall back to the ground, they are apt to go through a cycle and emerge as adult flies in time to lay more eggs to infest still more clover. Cutting red clover before these eggs hatch-----helps control the clover-flower midge which is a troublesome pest in some red clover sections."

I was anxious to hear Dr. Pieters say something on the subject of cutting alfalfa, so I brought up that question.

"We're cutting alfalfa a little earlier than we used to," was his opening statement,"but", he said, "It's possible to cut alfalfa so early that the cutting will seriously affect the stand of the crop. Alfalfa is a legume plant that is high in protein, and if cut for hay while it is young, juicy, and tender the protein content may be unusually high, but that early cutting is not recommended because it shortens the life of the plants producing the hay. In other words, many hay plants would make a better quality of hay if cut early, but the early cutting, in some instances, would be like killing the goose that laid the golden eggs. -- Not best for the future. Most alfalfa growers today wait until there is quite a sprinkling of blooms before cutting."

Lespedeza is a splendid legume hay in some sections of the country, but it's often cut too late. This late cutting is one of the things responsible for such a small amount of leafy material in lespedeza hay. Lespedeza is allowed to reseed itself in many sections of the country. Where this is practiced, it's necessary to let the plants reach a stage of maturity before cutting.

The time of cutting hay is also governed by the amount of rushing farm work at the time the hay is ready to cut.

All of the things I have mentioned, and even still others, have to be taken into consideration before we can answer the question---------- What's the best time to cut hay?

That question reminds me that cutting hay is not a matter of TIME, but a stage of growth and development in the plant. When the plant reaches that particular stage-----it's ready to cut for hay regardless of whether the time is March or December-------whether the plant is alfalfa or timothy---- or whether the place is Florida or Oregon.

In closing the interview on the time or stage of cutting hay, Dr. Pieters said, "I am of the opinion that the quality of much of the hay produced in this country could be improved by simply cutting the hay a little earlier than most of the hay is cut at the present time."

I asked for a more definite statement and he referred me to a number of publications which I'll offer you at the end of the program. Have pencil and paper ready.

Mr. W. H. Black, in charge of beef-cattle investigations for the Bureau of Animal Industry has had a lot of experience in feeding hays to animals so I asked him for a statement. He said that he agreed with Dr. Pieters----that the quality of most of the hay produced could be improved by cutting a little earlier.

The third and last road led me to Mr. W. H. Hosterman of the Bureau of Agricultural Economics. One of his jobs is to grade hays. I asked him the same question about the time of cutting hay, and his reply agreed with Dr. Pieters and Mr. Black--------THAT THE QUALITY OF MUCH OF OUR HAY COULD BE IMPROVED BY CUTTING THE HAY A LITTLE EARLIER.

Now of course, you want to know-- HOW MUCH EARLIER? And there are so many things wrapped up in that part of the question that I'm going to offer you the bulletins at this time and let you write for the ones that fit in to your hay making program. When they come, you can study out the advantages of cutting at the different stages and select the one that best suits your program. Here they go.

PRODUCING HIGH-GRADE ALFALFA HAY------is Farmers' Bulletin No.1539-F.
RED-CLOVER CULTURE ----------is Farmers' Bulletin No.1339-F.
SOYBEAN SEED AND HAY PRODUCTION-------is Farmers' Bulletin No.1605-F.
CUTTING TIMOTHY HAY----------is Farmers' Bulletin No. 990-F.
LESPEDEZA AS A FORAGE CROP----------is Farmers' Bulletin No.1143-F.
COWPEAS, UTILIZATION----------is Farmers' Bulletin No.1153-F.
JOHNSON GRASS FOR HAY----------is Farmers' Bulletin No.1597-F.
SUDAN GRASS----------is Farmers' Bulletin No.1126-F.

Well folks, I haven't answered the question directly because I didn't have time, but I have told you to cut hay a little earlier.

--Oo--

CLOSING ANNOUNCEMENT: You have just listened to one of the Farm Reporter programs broadcast from Station_____ in cooperation with the United States Department of Agriculture. You are invited to write this station for copies of the bulletins mentioned in this talk.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Tuesday, July 15, 1930.

Crops and Soils Interview No. 44: World Shifts in Wheat.

ANNOUNCEMENT: All of us, including your farm reporter at Washington, have been hearing a good bit about wheat lately. He has been talking directly with the specialists of the United States Department of Agriculture. They have given him a general picture of world wheat production and consumption. It interested him. He thinks it will interest us ------ Go ahead, Mr. Reporter. Tell us about it --------

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There have been big changes in the world's wheat production in the last few years. Since we grow more than we eat here at home, those changes have been very important to our wheat farmers. The prices our wheat farmers get are affected by the wheat our competitors in other countries grow and the wheat our customers in other countries eat.

Who grows the world's wheat? And who eats it? Why is it some people are telling us there is need to adjust wheat acreage? I asked Dr. O. C. Stine, of the Statistical Division of the United States Department of Agriculture, to outline to me what has been happening, in wheat, over this little old globe of ours.

The folks in most of the countries of western Europe don't grow enough wheat to feed their people. They furnish a big market for the surplus wheat of countries which grow more than they need at home.

Since the World War, some of those western European farmers grow less wheat than they used to. They have found it hard to compete with the big-scale wheat farmers of other countries. They have put land to other crops or let it run to pasture for dairy herds. But other European wheat producers have been encouraged to increase output by government bounties. The aim is to make these countries self-sufficient in wheat production - or as nearly self-sufficient as possible.

The people of those countries have been eating more wheat. The population in the cities has grown faster than the population on the farms. That has been causing an increased demand. So far, that sounds well. That has meant a bigger demand for wheat.

And that's not the whole of it. Before the World War, the chief sources of supplying that demand of the wheat-short countries of western Europe were Russia, the great Danube valley region, and British India.

Russia, before the war, was one of the biggest wheat-producing and wheat-exporting countries in the world. In recent years, however,

(All Regions)

There are lots of other products often wasted which will make equally good feed for winter. But before I go any further, perhaps I'd better qualify these statements a little. I guess all of you understand, though, that there is scarcely any roughage, either dry or in silage form, that is sufficient by itself. Practically any roughage needs to be supplemented by a pound or two of cottonseed meal, or some similar high-protein feed.

Now let's mention a few more of those possibilities in the winter feed line. Take hay, for instance. Hay that has been badly damaged by rain in the process of curing, may be partly saved by putting it in a silo.

Or take straw. The most important thing is to see that it is properly stacked, or blown into the barn.

In some southern and eastern states they "top" their corn. That is, they cut off the tops of the stalks before the corn is really ripe and store these tops away. They make good feed.

If corn is cut and shocked, the better you set up and tie the shocks, of course, the better feed you'll have. If shocked corn is husked out, cut up --- and sufficient water added it may be made into silage which has about 1/3 to 1/2 value of regular corn silage for wintering mature cattle.

Along about the first of September you'll be cutting the red clover in your grain stubble for the benefit of your next year's stand. This will make good feed for the winter, also.

In the South there are cottonstalks; in the southwest there are prickly pear and other dry land plants; and in beet growing sections there are beet tops and trimmings. Then there is the refuse from corn canneries, and pea canneries; the pomace from cider and vinegar works; cull apples, either fresh or made into silage.

In fact, you can almost say that cattle will make good use of anything that is not poisonous. There ARE a few things which won't do them much good. One is sugar cane bagasse and the other is peanut hulls. Neither has much, if any, feeding value.

Someone was asking me the other day about shredded fodder. I told him that it made good feed and that cattle seem to eat it more readily. Whether roughages, in general, should be chopped up or ground up, hinges on this question: Will cattle eat enough more of the material when it is cut up to pay for the cost of cutting? For instance, if a fellow has feed worth $5 a ton and the cattle will eat half of it as it is; then it won't pay him to spend $3 a ton for grinding. He would be losing 50 cents on the job. It might, however, pay him to grind at a cost of $2. Or it might not, depending on whether he could get other feed cheaper and so forth and so on.

You'll find valuable tips on this question, as well as on other cattle feeding questions, in farmers' Bulletin No. 1549-F, "Feeding Cattle for Beef." Drop me a line and I'll see that a copy is mailed to you.

And now let's return to the present for a few moments. I just want to put in a good word for shade. Try to provide some shade for all stock this time of year---it's a mighty good investment. Hogs need it especially, but horses, cattle, sheep and chickens need it as well.

If your hog lot isn't favored with good natural shade--which is the best kind---take my tip and build a temporary shelter for the hot weather. A good temporary shelter can be cheaply and easily built by setting some posts ---building a framework about 3 1/2 to 4 feet from the ground---and covering it to a depth of about 2 feet with straw, hay, weeds, or something of the kind. This kind of shade is cheaper and better than boards. It allows the rain to trickle through and lay the dust; and there's always plenty of dust wherever hogs lie.

The Department of Agriculture recommends some simple shelter of this sort; and you'll find plans for a very cheap summer shelter in Farmers' Bulletin No. 1490-F, called "Hog-Lot Equipment."

I asked a friend yesterday how he managed to get so much service out of his work horses. He has some of the hardest-working horses in the county and yet they always seem to be in perfect condition.

He told me that "regularity" is his watchword this time of year. He thinks it is very important to feed and water regularly.

And not only that, but he gives horses a special summer ration. Knowing that the size of the horse's stomach is rather limited he feeds concentrated feeds to supply energy for work, and gives roughage sparingly, preferably at night after the day's work is done. For horses on hard work, he tells me he feeds from 1 1/4 to 1 1/3 pounds of grain a day per 100 pounds live weight--- and 1 1/4 pounds of hay a day per 100 pounds live weight.

Here are some of his rules. Use nothing but clean, good-quality feed. Water the horses before and after feeding and also late at night---unless the horses can get water in the pasture. In very hot weather, water the horses while they're working in the field. But never water when animals are very warm. Let them cool off first.

He also offers a suggestion about grooming in hot weather. He says that a daily grooming is especially important at this time of year. He suggests that it's a good idea to sponge off the work horse's shoulders every day, in addition to the regular combing and brushing. Also clean the collar and all bearing points of the harness, to help prevent chafing and sore shoulders.

A good publication to have handy is Farmers' Bulletin No. 1419-F, called, "Care and Management of Farm Work Horses." Let me know if you want a copy.

ANNOUNCEMENT: Your Farm Reporter, spokesman for the U. S. Department of Agriculture at Station_____has just brought you his livestock talk. He mentioned three bulletins to-day: "Feeding Cattle for Beef," Farmers" Bulletin No. 1549-F; "Hog-Lot Equipment," Farmers' Bulletin No. 1490-F; and "Care and Management of Farm Work Horses," Farmers' Bulletin No. 1419-F.

Send your requests for these bulletins to Station _____ or to the Department of Agriculture in Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service

YOUR FARM REPORTER AT WASHINGTON Wednesday, July 16, 1930

NOT FOR PUBLICATION

Speaking Time: 10 minutes.

Poultry Interview No. 44: EFFECT OF MOLT ON EGG PRODUCTION

ANNOUNCEMENT: And now, for the next 10 minutes, we hear again from Your Farm Reporter at Washington. To-day is his day with poultry raisers, and he brings you at this time interesting answers to questions about molting, and the effect of molt on egg production. Why does a hen molt---- and how? How should a poultryman take care of his flock at molting time? Is there any way to turn the molt from a liability to an asset? These are some of the questions about which he's been chatting with his friend Mr. Lee of the Department of Agriculture. And now, let's hear what he has to say. All right, Mr. Reporter.

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When a hen molts she is taking her vacation----and at the same time she is getting herself a brand new coat of feathers. Now I don't suppose anyone will begrudge the hen either her rest or her new coat. If we had our own way about it, we might arrange things differently----but we don't. Mother Nature has fixed it so that the hen gets this rest period in the summer and early fall, and that's that. You can't stop a hen from molting.

However, you can help the hen to get through the molt quicker than she would do without help. You can, by proper feeding and good management, get her back to laying as soon as possible. And of course, the sooner the better as far as your poultry profits are concerned.

This was the theme of Mr. Lee's remarks, and then he went on to give me the details.

He pointed out that the molt period takes from two to three months. The exact time depends on several things. It depends on the breeding behind the hen, for one thing. It depends on the time the molt begins, for another. And then it depends on the feeding and condition of the hen.

Obviously then, we want hens of good breeding----hens that have been bred for late molting. We want late molters, because it's a well-known fact that a hen which starts to molt in July or August takes longer to molt than a hen which doesn't start until September or October. And third, we want to feed hens well and to see that they are in the best of condition at this time of year.

Mr. Lee put it this way: "Anything that will make a hen stop laying

during the summer months," he said, "throws her into a molt. So the poultry raiser's problem is to provide conditions that will keep hens laying well into the summer. If the hen stops laying now, in July or early August, she will not begin laying again until winter."

And here's another thing to be thinking about at this time. The fact is that early molters are usually poorer producers and late molters are the better producers. Mr. Lee points out that this indicates that egg production of a flock can be improved by selecting the late molters for breeding stock next winter. Hens molting in October and November produce nearly twice as many winter eggs, on the average, and 50 per cent more eggs for the entire year, than hens which molt in July.

He also reminded me that it usually pays to cull out hens which start to molt in June and July. Those which start to molt early in August may or may not be culled, depending upon how close you cull your flock. And those which do not start to molt until after the middle of August are usually good producers, although the very best producers usually lay well into the first part of September, or even later.

This, by the way, is his answer to that question: Is there any way to turn the molt from a liability into an asset? Molting becomes an asset when it is used as a guide in culling. And it is one of the most important guides we have.

He added, however, that you want to remember that care and management have quite a bit to do with time of molting. In other words, give the hen a fair break before you decide to get rid of her. Remember that anything which stops egg production tends to bring on the molt. Moving hens into another house is one thing which is likely to start molting. And underfeeding is another.

Now for the important question: What sort of care does the hen need at molting time?

Well, Mr. Lee says that the same feeds which give good egg production are also best adapted to growing new feathers. This means plenty of mash feed during the molt. Mash is the egg-producing and high-protein part of the ration. Avoid extreme changes, either in the ration or in the method of feeding. Don't move the hens to a new house, and don't confine hens which have been used to free range. Any such change is apt to throw the hen into a premature molt.

Here are a few concrete suggestions Mr. Lee gave me. Provide a constant supply of mash, he said. Use scratch feed sparingly so that the hens will eat more mash than scratch feed. The best proportion of mash and scratch feed depends upon how the hens have previously been fed and upon their physical condition. But, in any case, see that the mash makes up from one-half to two-thirds of the total feed.

A good way to get hens to eat more mash is to feed one light meal of moist mash every day in addition to keeping dry mash available all the

time. It's also a good idea to mix this moist mash with milk instead of water during the molting period. This makes it more palatable and the hens will generally eat more of it.

Green feed is another important part of the summer and early fall ration. Mr. Lee says it is a big help in keeping the hens in good condition while they are renewing their feathers.

Of course, this same plan of feeding and management, which puts hens in good condition for molting, also helps to keep up good summer egg production. The big items are plenty of mash, feeding of milk, good sanitation in houses and yards, and good ventilation. Be on the lookout for lice and mites. Keep the houses clean---spray or paint the roosts if you see signs of mites---use sodium fluoride dip or powder to kill lice.

Also, says Mr. Lee, break up all broody hens promptly, so that they will get back to egg production as soon as possible.

He emphasized the fact that any neglect in management at this time of year will immediately slow up egg production. And of course once the hens stop laying, it is almost impossible to get them to lay again until late fall or winter.

Mr. Lee mentioned two bulletins that you might want to write for. One is called "Feeding Chickens," Farmers' Bulletin No. 1541-F; and the other is "Farm Poultry Raising," Farmers' Bulletin No. 1524-F.

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ANNOUNCEMENT: That concludes Your Farm Reporter's report to poultry raisers. If you would like to have copies of Farmers' Bulletin 1541-F and Farmers' Bulletin 1524-F, write to Station_____ or to the Department of Agriculture in Washington, and they will be mailed to you.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. Thursday, July 17, 1930.

POSSIBILITIES OF COOPERATIVE MARKETING:

No. 7. Responsibilities of Co-op Members and Directors.

ANNOUNCEMENT: Station_____ is cooperating with the Federal Farm Board and the United States Department of Agriculture in presenting a series of sixteen talks on the possibilities of cooperative marketing. These talks come to us through your farm reporter at Washington. Last week, you recall, we had the sixth of the series telling us how to go about forming a co-op. Today in the seventh, we are to hear something of the responsibilities of members and directors of farmers' associations.------

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How many parts are there to a co-operative association?

I guess most of us would say there are three parts; the members, the directors, and the officers. I know that is what I would have said.

But Mr. J. W. Jones, the membership man in the co-op division of the Federal Farm Board, calls my attention to the fact that in reality, only the members compose the association. And he spells "members" with a capital "M".

Of course, membership being his specialty, you might expect him to do that. However, he seems to be right about it. As he points out, the other so-called parts, the directors and officers, are only the delegates or the hired hands of the members. The members are the association.

That is not just a lot of hokum to make the members feel fine. The full responsibility for a successful co-operative association rests directly or indirectly on the members.

If the manager or other officer is inefficient, or if the directors are inefficient, in the last analysis the members are to blame. They are responsible for not selecting better directors or employees, or for keeping inefficient ones on the job.

As Mr. Jones puts it, a co-operative association is a democracy and an intelligently active membership will produce a successful co-operative. If the membership is inactive or not intelligent, the co-operative succeeds only by luck. Sometimes, he says, a co-op is lucky enough to happen to have good management. But in most cases, good management is the result of intelligence and interest on the part of the members.

I can almost hear some of you growl; "What does he mean, 'intelligence and interest'? "What can the members do?"

Well, the members are responsible for the volume and quality of the products handled by the Association. The members are responsible for increasing the membership in their community. They are responsible for the reputation the association has in that community. Then they are responsible for selecting their Directors, and for the general direction of the affairs of the association.

In fact and theory, the members are the association. In going up and down the country, talking to co-op members, however, Mr. Jones says he finds that many members fail to realize that in their own minds and in their own thinking about the association. They speak of the association as "they"instead of "we". In most co-ops only a small part of the members go to the annual meetings or take part in the selection of Directors. Mr. Jones gives some of us a sly dig about that. He says the affairs of the association probably suffer less from the inactivity of many of the members than is sometimes thought. The ones who do take part are the more intelligent ones.

The selection of directors by the members is one of the member's biggest responsibilities. Directors are members selected by other members to work out policies and select and supervise the management. They can keep a closer look-out on the affairs of the association than would be possible for the members. The director's job is one of heavy responsibility. They are in a position of trust. The members have to depend on them to get sound policies, and capable managers, and efficient operation at the least expense.

It is up to the directors, Mr. Jones says, to familiarize themselves with the details of the working of the association. They should know its financial condition at all times. They should demand and go over thoroughly full and accurate reports from the management at each Director's meeting.

Mr. Jones suggests it is better to have such reports mailed to the Directors a few days before the Director's meeting. So they can act intelligently and deliberately at the meeting. That means that the directors should study and know how to interpret auditors' reports.and balance sheets. Otherwise, associations may be insolvent and ready for bankruptcy before the Directors and members discover that the association is in poor condition financially. The Directors owe it to the members to be diligent in supervising and checking up the management.

Most directors are producer members themselves. Most of them are not qualified for actually managing the detailed operations of marketing. As Mr. Jones puts it, the members don't select them for that anyway. They are responsible for getting a capable general manager to take care of that end of the business. The Board of Directors is responsible for formulating general policies and then not interferring with the general manager in the execution of those policies. They should give the general manager a free hand in hiring and firing help with the consent of the Board.

It is the Board's duty to delegate responsibility; and then check up to see that the members are getting their money's worth for every ex-

penditure for men, material, and service. The members are the Association. It is their money that is being expended.

In looking over farmers cooperative associations throughout the country, Mr. Jones has found that, sad to say, some directors have at times used their position as Directors for personal gain and advantage. He has special reference to this thing of directors putting their own kin folks into jobs in the association. The director who does that weakens himself as a director. In fact, he says, it is a plain breach of the trust imposed by the membership when Directors place or permit the placing of their relatives in salaried position in the Association. A Director's relatives can find jobs outside the association and the association can get equally as good help not related to Directors. In that way, both the Association and the Directors will be saved embarrassment and being placed on the defensive.

Members should therefore exercise care and attention in the selection of their Directors. They should chose men as directors who have been successful in running their own business. They should elect men who have an extensive interest in the commodity handled by the Association, and whose primary objective as Directors will be the welfare of the membership, and therefore of the Association.

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ANNOUNCEMENT: You have just listened to the seventh of a series of sixteen talks on the possibilities of cooperative marketing. These talks come to us through your farm reporter at Washington and are presented by Station ------ in cooperation with the Federal Farm Board and the United States Department of Agriculture. The eighth of the series will be presented this time next week and will deal with the services of large-scale cooperative sales agencies.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
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YOUR FARM REPORTER AT WASHINGTON Friday, July 18, 1930.

NOT FOR PUBLICATION

Speaking Time: 10 minutes.

Dairy Interview No. 44: THE SUMMER SLUMP AND WHAT TO DO ABOUT IT

ANNOUNCEMENT: At this time Your Farm Reporter at Washington is here again to bring his weekly report to dairy farmers. He's been talking with dairy specialists of the Department of Agriculture about that slump in milk production which usually comes along about this time of year. He's going to tell you what he found out---about the causes of the slump, its effects, and what can be done about it. All right, Mr. Reporter.....

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Most of you know that Mr. T. E. Woodward is in charge of the investigational work in the feeding and management of dairy cows at Uncle Sam's dairy experiment station at Beltsville, Maryland, just outside Washington. Anyway, Mr. Woodward was telling me about some experiments he has supervised out there at Beltsville.

The results of these experiments indicate that we may have been a little harsh on the hot weather and on the pesky fly. Goodness knows the fly and the heat are to blame for enough trouble without our blaming them for something they haven't done. But the point is that the midsummer slump in production is commonly laid either to hot weather or to flies or to both. Mr. Woodward doesn't deny that both flies and July weather affect cows, but he does believe that their actual influence on milk production has been somewhat exaggerated.

Perhaps we've been blaming flies for something we are largely responsible for ourselves, he suggests. In short, all the evidence indicates that the big item in summer production is neither flies nor hot weather, but FEEDING.

Some of the cows on test at the Beltsville experiment station have been liberally fed both winter and summer. They are kept reasonably free from flies. Their production declined 5 per cent a month in December and January and 7 per cent in July and August. Mr. Woodward says this small difference WAS probably due to weather conditions.

Now, other cows at the station are fed and handled much as any good dairyman takes care of his cows. They get grain, alfalfa hay, and silage in winter; and in summer they run on pasture, with grain in addition according to the quantity of milk they produced. There were flies, of course, but they weren't present in great numbers. These cows declined 9

per cent in production in December and January, and 18 per cent a month in July and August.

Now what do we learn from this? Mr. Woodward points out that when the feed was the same for summer as for winter, the summer decline was 7 per cent a month and the winter decline five per cent. But---when the feed was not the same, when cows ran on pasture during the summer, the monthly decline was 18 per cent in summer as compared with 9 per cent in winter.

This seems to indicate very definitely that the big reason for the midsummer slump in milk production is lack of sufficient feed.

Mr. Woodward also tells me they've tried out numerous repellants intended to keep flies away from cows. Speaking generally, the repellants did little or no good so far as increasing milk production is concerned. What the reason is---whether flies had little influence on milk production, or whether the repellants were as bad as the flies--- is open to question. But whatever the reason---it seems evident that feeding is the main consideration.

Another thing to bear in mind about these experiments is that all the cows were given some grain during the summer as well as pasture. If they hadn't been given grain, the July and August slump would undoubtedly have been much more than 18 per cent.

You all know the symptoms of the summer slump---pasture short or dried up, or possibly all grown up to weeds, and thin cows. Even the best pastures with very few exceptions naturally run down somewhat as the summer goes along. Permanent pasture plants grow faster in May and June than they do in July and August, even when rainfall is abundant. And during drought, the grasses practically stop growing, especially on poor soils. Mr. Woodward told me about a pasture experiment at the Beltsville farm. He said that in August last year a half-acre plot of grass grew at the rate of only 2 pounds per acre per day. At this rate at least 30 acres would have been required to produce enough feed for one cow. But this same pasture during May grew fast enough so that one acre would have supported one cow.

"This experiment merely emphasizes the fact that in case of drought the feed just isn't there," he said.

Now, what are you going to do about it? Mr. Woodward made several suggestions about midsummer feeds, and here they are. In the first place he mentioned fertilizers. There is no doubt, he said, that liming, manuring and fertilizing will help the growth of pastures in midsummer. In fact, on some soils and in climates of plentiful rainfall, fertilizing the soil may result in enough grass to furnish adequate feed.

However, Mr. Woodward declared that pasture usually isn't enough. Other provisions must be made if a bad slump is to be avoided, and the kind of provision you make depends partly on the part of the country you live in. In the West for example, hay of good quality is readily and cheaply made. So it often pays to give cows on pasture free access to hay at all times during the summer. In the South this isn't generally the case because an abundance

of good hay isn't readily available. Southern dairymen can more profitably depend on summer silage. Or they may use lespedeza, which comes on in the summer after the growth of other pasture plants has slowed up; or they may have a temporary pasture of Sudan grass. In the Northern and Central States, on the other hand, dairymen have a wider choice. They have a choice of hay, silage, temporary pastures, or the grazing of fields from which hay is cut early.

The best feed in any case, says Mr. Woodward, is the feed that can be produced most surely and most cheaply.

While we were talking, we were joined by Mr. J. B. Shepherd, who is associated with Mr. Woodward in the feeding and management work of the Department of Agriculture. Mr. Shepherd made an additional suggestion that I think I should pass on to you. He pointed out that particular attention needs to be given at this time to cows that freshened in the spring. These cows need to be especially well fed during the slump period. And this is why: Having freshened in the spring, they should be giving maximum production at this time and normally there would be little decline in their milk flow for two or three months after freshening. On the other hand, if their production is allowed to drop off NOW, it's hard to get them back to normal again. A slump in midsummer will cut a certain amount of milk from their production for each succeeding month of their lactation period, and greatly lower their total production for the year.

Here are the ideas that both Mr. Woodward and Mr. Shepherd seemed to emphasize most, so I'll leave them with you in closing.

First, they believe that many cows do not receive enough feed in summer. We can not turn cows on pasture and then forget about their feed. In most sections of the country provision must be made to supplement the regular pastures. Failure to recognize these facts, they believe, means thin cows, a rapid decline in production of milk, and less profit.

Now my time is up, but I want to call your attention to two publications of the Department of Agriculture. One is called, "Feeding the Dairy Cow," Farmers' Bulletin No. 1626; and the other Leaflet No. 7-L, entitled "Feeding Dairy Cows in Summer."

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ANNOUNCEMENT: You have been listening to Your Farm Reporter at Washington report the results of his interview on the question of "The Summer Slump in Production. You may get copies of those bulletins he mentioned by writing either to Station_____ or to the Department of Agriculture in Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

FARM REPORTER - LIVESTOCK Monday, July 21, 1930

Not for Publication

Speaking Time: 10 Minutes

ANNOUNCEMENT: At this time we present again our Farm Reporter at Washington, - radio representative of the United States Department of Agriculture at Station_____, who brings you timely news each week-day except Saturday. Today our Reporter touches on a variety of livestock topics. He starts off with a few words about roughage feeds and about saving these feeds now for next winter's use.

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I was talking with a friend yesterday about utilizing various cheap feeds for winter roughage, and it reminded him of a story.

A cigar salesman and another fellow were playing golf together, said Jim. The salesman offered his friend a cigar.

"You're now smoking the best 5-cent cigar in the world," he declared. "In fact, it costs us 6 cents to make each cigar."

"Wait a minute," said the friend. "You mean to say that each cigar costs 6 cents to make, and yet you sell them for 5 cents? How do you make money that way?"

"Oh, volume of production, volume of production," replied the salesman.

Now, I don't know that my friend intended this story to carry any particular moral; except that at the time we were discussing one farmer who seems to go on that theory. He seems to go on the theory that no matter what it costs him to feed and house his stock, if he has enough animals he's going to make money. So far the theory hasn't worked out very well. I suspect that he hasn't given enough attention to his costs of production. In some cases I know that his costs have been more than his market returns.

But I just mention this because utilizing cheap roughage feeds happens to be one way of cutting down feed cost. Now, of course, there is no object to saving cornstalks or straw and similar roughage if you can get plenty of good winter feed relatively cheap. This roughage isn't the best kind of feed. However, under most conditions farmers will profit by taking advantages of cheap feeds---especially for cattle---and especially if you have a silo.

Crops that have been damaged -- by hail, flood, frost, wind, or insects-- may be cut and put into the silo. They'll make good feed, and at the same time you avoid waste.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Tuesday, July 22, 1930.

Crops and Soils Interview No. 45: Chemical Weed Killers.

ANNOUNCEMENT: We've asked our farm reporter at Washington to ask the specialist of the United States Department of Agriculture about chemical weed killers. We've all heard a good bit about chemicals for killing weeds of late. -------- Well, Mr. Reporter, what did you find out?--- What are the prospects for getting rid of weeds on crop land with chemicals? -------

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As you requested, I went straight to Mr. M. W. Talbot, who is the weed specialist in the United States Department of Agriculture, and asked him about chemical weed killers.

Before Mr. Talbot told me anything else, he said that on crop land, weed-killing chemicals are no substitute for tillage, pasturing, and cropping methods of keeping down the top growth of weeds. He said that the Department has tested many chemicals for weed killing, and has found that most of them have proved either ineffective, too costly for ordinary use, or too difficult to obtain. Four types of substances, he said, chlorates, oils, common salt, and soluble arsenicals, are fairly effective for weed killing, but each of these substances is limited by certain drawbacks. These drawbacks are explained in a new leaflet recently issued by his office, and can only be mentioned briefly in a limited talk over the radio. Take arsenic solutions, for instance. Arsenic and all its compounds are deadly poisonous when taken internally, and when it is used for weed killing the greatest care must be taken not to inhale the dust or the fumes. Care also must be taken not to bring the hands near the face or the mouth while using the chemical. Utensils used in the preparation of the solution are dangerous until they have been thoroughly washed. Arsenic solutions should not be used on tennis courts or playgrounds, nor should they be used on areas where grazing animals might become poisoned. Sodium arsenite, one of the compounds of arsenic, has a salty taste which attracts animals, and many innocent old cows have thus been killed. Aside from all this, however, sodium arsenite, properly prepared and used according to directions, is a powerful weed killer.

Much interest has recently been aroused regarding the use of chlorates for weed killing, and a number of the State experiment stations have been experimenting with them. In many cases chlorates have proved to be effective for this work, but with certain weeds, chlorates have failed. The Department of Agriculture has used them successfully for killing wild currant and gooseberry. These plants, as you perhaps know, are the hosts from which spores of the blister-rust disease are transferred to white pine trees. Experiments by the Department have demonstrated that it is possible to kill livestock with large doses of strong sodium chlorate solution. Foliage sprayed with this material has a salty taste which attracts livestock. Whether or not grazing animals would nor-

mally consume enough chlorate to cause death by browsing chlorate-sprayed plants is unknown. As a general precaution it is recommended that livestock be kept off chlorate-sprayed areas until the surplus chemical has been washed away by rain. The great drawback in experimenting with sodium chlorate is the danger of fire. The Department has found that, when sodium chlorate becomes dry on clothing or other similar material, it takes fire very easily and burns with great rapidity. The new leaflet on chemical weed killers explains this dangerous feature in detail.

Oils have been used successfully to kill weeds in many cases. They have great penetrating power, however, and should not be used where nearby trees or other valuable vegetation might be killed. Nor should oil be used around lumber yards or similar places, for it is highly inflammable.

Common salt is cheap and easily obtained, and its use for killing weeds and grass in sidewalks and gutters is well known. Salt is not poisonous, unless grazing animals consume it in large quantities, and for many kinds of weeds it is about the safest home remedy. It may be used dry, about a pound to the square foot, or as a solution, about three pounds to a gallon of water. Like other chemicals, however, salt will ruin the soil for an indefinite period for growing other plants, according to the amount applied. In using salt solution to kill weeds in your gravel path, therefore, be careful that you do not also kill the underlying roots of nearby trees and valuable plants.

A number of other chemicals are discussed in the new leaflet on chemical weed killers, although no patented preparations, except chlorates, are mentioned. This leaflet may be obtained by writing to the Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C., or, this Station_____ from which you are now hearing, will be glad to forward any of your requests to the Department for a copy of this weed-killing circular.

ANNOUNCEMENT: The chemical weed killers circular can be obtained from the Bureau of Plant Industry, U. S. Department of Agriculture, Washington, D. C. Or, this Station_____which cooperates with the U.S. Department of Agriculture in presenting these programs will be glad to forward any of your requests to the Department for this weed killer circular.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON

Wednesday, July 23, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Poultry Interview No. 45: DEVELOPMENTS IN FATTENING POULTRY

ANNOUNCEMENT: And now, folks, here is Your Farm Reporter at Washington, ready with his latest report for poultry raisers. Today he gives us a look at one of the important side-industries within the poultry industry. He's going to tell you about developments in fattening poultry, as he has learned about them from his Department of Agriculture friend, Mr. A.R.Lee, Department poultryman. All right, Mr. Reporter.

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During the last few years the main watchword in the poultry industry has been breeding for high production. We've paid so much attention to egg production that fattening of poultry has been somewhat overshadowed.

However, there is always a certain proportion of chickens which have to be sent to market---and thus which need to be prepared for market. This brings up the question of the most efficient means of preparing them------- and that is what I went to see Mr. Lee about.

First, perhaps, we'd better define the term "fattening." And here is Mr. Lee's definition:

"Fattening," he says," is the finishing process designed to prepare chickens for human consumption in the most economical way."

Now, it is true that in the real sense of this definition, very little poultry is fattened on farms. Most fattening is done commercially, and commercial fattening stations turn out hundreds of thousands of chickens every year.

However, it seems that all of us--consumers as well as producers--are interested in the most economical way of preparing chickens for human consumption. And besides, there's no reason why more poultry raisers shouldn't fatten their surplus poultry for market---that is, if you have a market for high-quality poultry meat.

The main object of fattening," Mr. Lee explained," is to improve the quality of the lean meat. Fatty tissue, as such, is merely of secondary importance. When a chicken is properly fattened much of the water in the flesh is replaced by oil. That's why the flesh becomes tender and juicy when it is cooked.

In the commercial fattening stations, he told me, young birds are fed from 8 to 14 days. During that time they make gains in weight of from 15 to 35 per cent. Birds must be carefully selected and handled in order to gain on fattening rations over a long period. Many lots cannot be kept over eight days, for this reason.

Hens are usually in fairly good flesh. However, those which are thin or poorly feathered are often fed from 6 to 8 days, during which they gain from 5 to 15 per cent in weight.

Most fattening stations feed chicks a mixture of corn meal and liquid buttermilk. And sometimes they add oat or wheat products, with corn meal making up about 60 per cent of the grain ration.

Mr. Lee emphasized that milk is very essential in a fattening ration; and this is true both for commercial fattening and for fattening at home. Milk generally makes up from 50 to 60 per cent of the feed, although in some recent tests good results were obtained with less than 50 per cent.

Most fattening stations seem to prefer to mix their own feeds. However, commercial fattening feeds are sometimes used.

One of the important developments in fattening, according to Mr. Lee, is the increased attention given to selection of stock. And he believes the question deserves still more attention. Careful selection eliminates undesirable birds, tends to prevent outbreaks of disease, and also increase the average gains which can be made from a given amount of feed.

From 15 to 20 per cent of the poorest feeders can usually be removed to good advantage and sent to immediate slaughter, Mr. Lee says.

You can usually tell a good feeder from its appearance. For instance, a good feeder should have a broad head, prominent eye, smooth face, well-placed comb and wattles, and a fairly short beak.

On the other hand the poor feeder is usually characterized by a long thin beak, associated with a long thin head---the whole effect being a sort of crow-shaped appearance. The crow-type head is a distinct indication of low vitality.

Another difference is in the skin. A bright, moist skin indicates a good feeder, while the poor feeder usually has a darker, dry skin.

Don't feed the birds too heavily at first," says Mr. Lee. "Feeders find they get much better results and can keep the birds in condition better when they feed lightly for the first day or two. A good plan is to clean out the birds thoroughly when they go into the fattening batteries. Use either a solution of milk or water, or water to which antiseptic has been added.

"In the feeding stations it is also desirable to spray and disinfect chickens while they are in the batteries. This tends to prevent outbreaks of disease."

Where birds are fattened by the thousands, as in big plants, they are usually kept in so called "batteries," which are coop-like compartments usually built in tiers. Each compartment ordinarily holds from 5 to 10 birds; and many of the big establishments have a fattening capacity of from 10,000 to 50,000 at one time. The birds get no exercise and consequently utilize more of their feed for flesh production.

The operators of these stations examine the birds carefully each day for any signs of poor condition. Ventilation, of course, is a big problem during the summer and early fall. Precautions must be taken to keep the chicks from getting overheated. A large number of chicks together in one room give off a tremendous amount of body heat; and so the best possible circulation of fresh air is necessary.

Now, whether it pays to fatten broilers on the farm depends very largely on the condition of the birds. Where growing chickens on the range are in excellent flesh it often pays to sell them direct from the range rather than try to fatten them. On the other hand, if they have been growing fast and have well-developed frames, but are still thin, it may pay to fatten them for a short period. They can be inclosed in a small yard, or placed in a pen of some kind, or even put into fattening batteries.

Roasters may also be fattened on the range, in pens, in fattening crates, or in fattening batteries. The question to decide about fattening roasters on the farm is : Will it pay? Will the prices received pay for the costs of fattening? In many parts of the country farmers find that it is hardly worthwhile. On the other hand, it does pay where farmers can market their poultry direct to consumers or where they can get prices sufficiently above the prices of unfattened stock to justify the extra time and feed.

Farmers' Bulletin No. 1541, called "Feeding Chickens," takes up the question of fattening rather thoroughly. If you're interested, write for a copy of this bulletin and it will be sent to you free of charge.

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ANNOUNCEMENT: That concludes Your Farm Reporter's chat for today. Address your requests for Farmers' Bulletin No. 1541-F to Station_____or to the Department of Agriculture in Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

Thursday, July 24, 1930.

YOUR FARM REPORTER AT WASHINGTON.

POSSIBILITIES OF COOPERATIVE MARKETING:

No. 8. Services of Large Scale Cooperative Sales Agencies.

ANNOUNCEMENT: Each week for seven weeks now we have presented a talk on the possibilities of cooperative marketing. In doing this, Station ----- has been cooperating with the Federal Farm Board and the United States Department of Agriculture. Most of these talks have had to do with cooperative associations in general. Today, in the eighth of this series of sixteen, your farm reporter at Washington, will bring us a message from the specialists of the Farm Board about the services of the large-scale co-op.

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As you know, a big organization can often do a lot of things, for its members, that a little local can't do.

Mr. Hutzel Metzger, assistant chief of the co-op division, of the Federal Farm Board, has pointed out for us some of the services a large-scale farmers' co-op can perform better than the small association.

First he says, the large-scale sales agency can usually keep farmers in closer touch with their markets than can the individual local association working by itself.

That's because, as a rule, the big association maintains an organization at the market where the product is sold. By doing that, it finds out what the buyers want. Through its co-op member organizations, it can get that word back to the individual farmer member of the local, so that he can produce the type of stuff the market will pay the most for.

The large scale organization, ordinarily, has the advantage in standardizing, and grading, and processing. It can properly grade and pack the stuff for market.

Whenever there is a surplus or the possibility of increasing the demand, the large-scale association, has quite an advantage in advertising. It can do it at lower cost.

As an illustration of that sort of thing, Mr. Metzger cited the California citrus people who have kept up the price of oranges and lemons in the face of decline in prices generally. Their advertising costs run about four cents a box.

By handling a big volume, you cut down the cost or spread it out over more boxes and more farmers. The same holds true whether it is a box of

oranges, a pound of butter, a bushel of grain, or a head of livestock. The large-scale organization is often able to perform many services for its members at a very low unit cost. In many cases, the costs of the same services in a small organization with the overhead spread among a comparatively few units would be too high. The members would have to pay too much for what they would get out of it.

In cases where there is actually too much of the product produced, Mr. Metzger points out, the large-scale agency may be able to take care of the surplus by making it into a by-product. For the last five years there has been an overproduction of lemons in California, and the California Fruit Growers Exchange which controls ninety per cent of the crop has taken 25 to 30 per cent off the market and worked them up as flavoring extracts and other by-products.

Each week, the organization pro-rates to each grower group the quantity of the crop which will go to market, and the proportion which will be handled for what it will bring as a by-product. In that way that co-op has been able to keep the lemon business on a firm basis.

Nearly all milk co-ops do much the same sort of thing, when they convert into butter, and cheese, and other products, the surplus milk which would otherwise be marketed as fluid milk.

Another big advantage of the big-scale organization, as Mr. Metzger sees it, is that it can maintain research laboratories for improving the quality of the product, studying the market, and securing market information.

Our leading butter co-op, for instance, has chemists and bacteriologist who analyze each churning of butter. If they find the butter off quality, they send experts to the creamery to sample the air and water for moulds and bacteria which may be causing the trouble. Their findings are brought back to the creamery so any defects in production may be corrected. The research department works out practical methods to help the butter makers. If the trouble is in the milk itself, the creamery sends its agents to the farms so that the dairymen themselves can promptly correct any faulty production practices.

On the market side, the larger organization maintain statistical departments which assemble information on the present factors affecting production and demand. They forecast the quantity the market will be able to take and the supply which will be available the coming season.

In the matter of finances, also, the big scale co-op has some advantages. It can often get better banking connections on account of its larger volume of business. And having a big enough volume, if necessary, it can float bond issues and sell securities.

In marketing grain, the large-scale association operates on the terminal markets. Ordinarily, Mr. Metzger says, there is quite an advantage in having terminal co-ops condition off-grade grain and mix and condition

wheat so that all the profits from conditioning will be reflected back to the producer himself.

In the case of both grain and cotton, a large-scale association is needed to carry the marketing process all the way through, so that the producers will be paid according to the grade and quality of stuff they grow. Otherwise, the man who produces high quality grain or cotton may tend to get about the same price as the man who produces low quality.

Still another advantage the large-scale organization has over the small, is that it can pay salaries which will attract better men, while the cost per unit of the product sold will be considerably lower than in a small organization.

Then the farmers in a co-op do gain considerably in bargaining power by having a large-scale organization. However, Mr. Metzger declares that that old idea some of us used to have of getting a monopoly control of our farm stuff has been abandoned. The co-op can't get all under its control nor can it raise prices out of line with the supply and demand. According to what he says, the large-scale cooperative sales agency is first and foremost a service organization for doing the things for the member associations and the individual farmer members which they can't do, as cheaply or as well, by going it alone.

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ANNOUNCEMENT: This time next week Station_____ will join with the Federal Farm Board and the United States Department of Agriculture in presenting the ninth of this series of sixteen talks on the possibilities of co-operative marketing. At that time, we will begin to look into what cooperative associations have already accomplished and the outlook for the future.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, July 25, 1930.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Dairy Interview No. 45: SIGHTSEEING IN A MILK CONDENSARY

ANNOUNCEMENT: Your Farm Reporter at Washington, representative of Station____ at the Department of Agriculture, has been sightseeing in a milk condensary. And today he's going to tell you about it. He's picked up some interesting facts about how condensed milk gets that way; and why milk happened to be condensed in the first place, and so on. But let's hear your story, Mr. Reporter.

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Three weeks ago I was sitting in the office of a milk condensary, talking with the manager and with Mr. William White, dairy manufacturing specialist of the Department of Agriculture.

It was mid-morning. Just outside the window huge trucks were lined up waiting to unload milk and load up again with empty cans. At one end of the building a continuous line of full milk cans were streaming into the receiving room on a conveyor; at the other end empties were rolling out on a similar conveyor.

The building was a large one. Mr. White told me that milk condensaries always are fairly large. It doesn't pay to manufacture condensed milk on a small scale.

For my benefit the talk turned to the history of condensing milk, and I was an interested listener. I learned that while butter and cheese are as old as history itself, condensed milk is something new under the sun. You find both butter and cheese mentioned in the Bible, several times, but you'll find no mention of condensed milk in any history much before the Civil War period.

In fact, the first patent on a condensing process was issued to a man by the name of Gail Borden in 1856. A number of people had tried to evaporate milk before, mainly by boiling it down in an open pan. But if you have ever boiled milk in an open pan you know that this method isn't very satisfactory. If you boil it very long it takes a dark color and develops a strong cooked flavor.

Mr. Borden hit on the idea of evaporating milk in a vacuum. This is the way it is done today, and I want to say more about this process in a minute. But the point is that Mr. Borden's idea, patented back in 1856, worked, and formed the foundation for our present industry.

And it's quite an industry. The United States now turns out every year around a billion and a half pounds of evaporated milk and about 300 million pounds of sweetened condensed milk. Wisconsin alone produces about one-third of this total. The leading states are Wisconsin, with more than 500 million pounds of evaporated milk a year; California, with 152 million pounds; New York, with 112 million pounds; and Michigan, with 102 million.

Now, back of any such industry there must be a good reason and a demand; and so I wondered why it was that back in the middle of the last century Mr. Borden and others worked so hard looking for a satisfactory way to condense milk. Mr. White told me that one of the main sources of demand was the army. An army of thousands of men couldn't very well take their cows with them; and milk couldn't be transported very far because it would spoil. So they tried to figure out a scheme of putting it in concentrated form so that it could be easily transported; and of preserving it so it would stay sweet indefinitely.

And I might say here that there are two standard ways of preserving milk. A moment ago I mentioned evaporated milk and sweetened condensed milk. These are trade names and they're apt to be a little confusing unless you know what they mean. Both kinds are evaporated and both are condensed. The difference is that one is preserved by adding sugar, like jellies and preserves; the other is preserved by heating to high temperatures after it has been sealed in the can. The latter kind, which is called evaporated milk, is the one most widely used.

And now this brings me up to my trip through the condensary. I might as well say first that a condensary is no exception among modern dairy manufacturing plants in the matter of cleanliness. Every thing was spotlessly clean--from the white suits of the workers to the floors and walls. Most of the equipment----such as pumps and pipes--is made of copper or brass or nickel--all brightly polished.

The receiving room is not so different from that of a large creamery. A sample is taken from each can for examination in the laboratory---the milk is emptied into a tank and weighed---and the empty cans are put through an automatic machine which returns them to the farmer clean, dry and again ready for use. Then the milk is pumped from the receiving tank, through a cooler, into a storage tank where it is held until it's sent to the condenser.

The condensing takes place in huge copper retorts, cylindrical in shape, 6 feet in diameter and, including the accessories, some 20 feet high. The cylinders are topped with a rounded dome, so that they are entirely closed. They are commonly called vacuum pans, although I don't know why. "Pan" didn't strike me as an appropriate name for such a huge tank.

However, it is in these pans that the milk is boiled down to less than one-half of its original volume. In the bottom are steam coils, which heat the milk. At the top, connected to the dome, is the condensing chamber through which the vapors are drawn off. Nearby is a big pump, which not only pumps air and vapors out of the pan to produce a partial vacuum, but also pumps the water out of the condensing chamber. Mr. White explained that cold water is sprayed into the condensing chamber to condense the hot vapors, and thus they're pumped out in the form of water.

Now the reason why Mr. Borden's idea worked, is that milk boils at a much lower temperature in a vacuum than it does under atmospheric pressure. At sea level the boiling point is about 214 degrees Fahrenheit, Mr. White said. But in the vacuum pan it boils at 135 degrees. At this low temperature the vapors boil out more rapidly; and the milk condenses without developing that strong cooked flavor which it develops when boiled in an open pan.

About 1000 gallons of condensed milk are made at one time; and this takes about 2200 pounds of whole milk. However, all of this whole milk is not put into the vacuum pan at once. As the milk in the pan evaporates more milk comes in through a valve at the side.

Around the retort there is a platform, and a white-clad workman stands there to operate the controls. From the platform he can look through a little window in the dome and see what is going on inside. I took a peep through this peep-hole and I saw milk boiling more violently than I ever saw milk boil before. It had a sort of sudsy appearance. And at only 135 degrees Fahrenheit.

This man who stands on the platform, by the way, has all the controls right at his finger-tips. He keeps constant watch; and then regulates the steam valves, the milk valves, the pump, and so on, as the process requires.

When the milk boils down so that the operator thinks it is nearly done he draws out a small sample and tests it. The sample comes out through a special double-valve device, so that no air can get into the vacuum pan.

Then, after the proper concentration point is reached, milk is drawn out through a pipe at the bottom of the pan. It goes first through an homogenizer. This breaks up the fat globules so that the cream won't rise on the condensed milk. Then it is cooled and held in storage vats, until it is ready for the little tin cans, you see on grocery shelves.

A machine fills and seals the cans automatically and they then go to a huge steel cylinder for sterilization at a temperature of 235 degrees Fahrenheit. After this they are cooled again and put into a shaker, which is a device for breaking up any curd that may have formed during the intense heat. This leaves the milk smooth and creamy and finally ready for consumption---either today or a year from today.

Sugar-sweetened condensed milk, of course is treated a little differently. The sugar is added to the milk, heated and dissolved before the milk goes into the vacuum pan. Thus the milk is so heavy it does not have to be run through the homogenizer; and of course it does not have to be heated after it is canned because the sugar preserves it and keeps it from souring.

My next sightseeing trip, I hope, will be to a dry-milk plant. If my plans work out I'll be making it in the next few weeks; so, if you're interested, I'll try to get you some inside dope on dry milk.

--oOo--

ANNOUNCEMENT: Your Farm Reporter at Washington has just been telling you about his trip to a milk condensing plant. This concludes Your Farm Reporter's chats for this week, but he'll be back again Monday at this same hour. At that time he will make his weekly report on a livestock subject.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Monday, July 28, 1930.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

PREPARING CATTLE FOR THE SHOW RING.

OPENING ANNOUNCEMENT: "Preparing cattle for the show ring." That's the timely subject Your Washington Farm Reporter is going to discuss at this time. Remember that these Farm Reporter programs are broadcast 5 days in the week from Station_____ in cooperation with the United States Department of Agriculture. All right, Mr. Reporter, you're on the air.

---oOo---

Strictly speaking folks, the announcer is right. I'm on the air now, but when this subject was first assigned to me I went up in the air. Mr. E. W. Sheets, chief of the animal husbandry division of the United States Department of Agriculture, sent me a parachute in the form of some timely information and enabled me to make a safe landing. Now that I'm back on the ground, I'm going to try to pass on to you what he told me.

"To begin with," Mr. Sheets said, "many a good animal has been placed below an inferior one in the show ring because it was not properly trained and fitted for the event. For example, an animal may possess superior fleshing qualities, but if it is so restless in the ring that it does not allow the judge to place his hand on it, the judge will find it out."

"How can you remedy that?" I asked.

"By training it," he answered. "From calfhood teach it to lead and to stand squarely on all four feet with its head alert so as to exhibit its best features. A show animal must become used to strangers, to strange sights and unusual sounds such as it may hear at shows. The trained animal will often pose as though it knows it is being judged. The untrained animal may flinch, kick and pull on the halter, and often stands so as to give the appearance of a weak back, a narrow chest, or a poorly developed rump."

A great many of the livestock fairs, shows and expositions take place along in September and October. This, as you know, is only the 28th of July, so I asked Mr. Sheets if it wasn't a bit early to start getting livestock ready for the shows.

"No indeed!" he replied. Then he told me this story.

"Not long ago I rode a fast passenger train from Washington to Texas. The night I stepped on the train in Washington it was as clean and as spic-and-span as a new dollar. Why? Well, I am told that many hours are spent

cleaning and preparing trains before they are allowed to pull into the train sheds and receive passengers. That illustrates the point I want to make about getting livestock ready for the show ring. It often takes days, weeks, months and sometimes years of hard patient work before a very promising animal is ready to put its feet on the tanbark in the show ring. No, it is not too early to start getting cattle ready for the shows and fairs this fall."

Here's the next question I asked Mr. Sheets. "What's the most important thing in selecting cattle for the show ring?"

Probably most important of all," he said, "is that the animals be well-bred, and conform to well-established breed types. A well-bred, properly fitted show herd has good advertising value. The man who has the future of his business at heart, therefore, will not risk this reputation by attempting to take an inferior string of animals on the show circuit, nor will he stoop to questionable practices in fitting them. Buyers eventually judge the value of a breeding animal by its offspring. Any thought, therefore, of fitting animals for the show ring should always take into consideration only such practices as will without misleading, enable the animal to show to the best advantage."

"What are some of these things?" I asked.

"Well," he said, "after the animals have been selected, good feeding is a prime requisite. Many exhibitors use special feeds for their show animals, and a great many others get excellent results by using a good combination of home-grown feeds. This is where the advantage of using well-bred show animals is felt. They can generally be depended on to put on a desirable finish with farm-grown feeds.----

It is only fair to a blocky animal that it be trained to stand before the judge with its four feet placed squarely on the tanbark or sawdust. If it has a pliable and mellow hide and an evenly distributed covering of good quality, it is a shame not to train the animal so that the judge will discover these facts. A universal love of beauty points to the desirability of having show animals appear to their best advantage-----clean, sleek, and "dressed up" for the occasion. It's the same thing as wearing our best suit of clothes and putting on a smile when we go to the photographer.

There are a great many practices that reliable showmen follow in getting cattle ready for the ring. Mr. Sheets gave me some of the more important ones.

Diligent grooming is necessary.

Turning out to pasture only at night prevents the hair from sunburning, and helps to give the hair a beautiful glossy appearance.

Blanketing is practiced for the same purpose.

Clipping and curling the hair adds immensely to the attractiveness of an animal.

Training and polishing the horns of show animals is a step in the right direction, and helps in giving an animal that final touch which often captures the blue ribbon.

Trimming and polishing the hoofs is another practice many high-class showmen follow.

Honesty is the big thing in getting livestock ready for the show ring. All fair-minded livestock exhibitors feel that attempts to mislead, and to conceal defects in the animal's conformation are sufficient reasons for disqualification of such exhibitors from all further competition. Mr. Sheets said that a number of organizations, including the American Society of Animal Production, have openly condemned such practices, and that the country's great fairs have rigid rules regarding all so-called "doctoring" practices.

Fortunately, stockmen generally are fair sportsmen and unfair practices are rarely attempted. The livestock business is a long-time proposition, and a breeder who goes to the expense and trouble of attending State and National fairs with a herd of show cattle can ill afford to risk a reputation built up through years of careful breeding and selection.

Mr. Sheets gave me a lot of other valuable information about preparing cattle for the show ring, but the announcer has already notified me that I have 9 minutes down and only one more to go, so I'll have to cut off the steam and get under control.

Now I want to give you a Department of Agriculture publication written by Mr. E. W. Sheets, the man who helped me get down out of the air on this subject. This publication is called "THE BEEF CALF, ITS GROWTH AND DEVELOPMENT," and it's Farmers' Bulletin No.1135-F.

This publication contains 28 well written pages, 27 illustrations, and will help the 4-H Club member or the old-time exhibitor get animals ready for the contest between the aspirants for blue ribbon, the red ribbon or the white ribbon. A postal card will bring this bulletin to your mail box.

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CLOSING ANNOUNCEMENT: You have just listened to one of the regular Farm Reporter programs broadcast from Station_____ in cooperation with the United States Department of Agriculture. The Reporter mentioned Farmers' Bulletin No.1135-F called THE BEEF CALF ITS GROWTH AND DEVELOPMENT." You may have a copy of that publication by addressing your request to this station or by writing directly to the United States Department of Agriculture in Washington, D. C.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON — Tuesday, July 29, 1930.

Crops and Soils Interview No. 46: A Few Fertile Thoughts About Green Manure and Cover Crops.

ANNOUNCEMENT: Tuesdays, your farm reporter at Washington, reports on field crops, or on the soil in which they grow. He is our representative at the United States Department of Agriculture. He goes around and asks questions of the experts, and then passes their answers along to us. This time, he has been talking with one of the men who work with our invisible farm hands to keep the crops well fed ------ Well, Mr. Reporter, what now? ----------

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It won't be long now. It will soon be time to plow the stubble field and plant the winter cover crop.

I've been talking to Mr. Nathan R. Smith. He has been giving me a line on what's at the roots of this question of cover crops and green manure. Mr. Smith is in the soil bacteriology investigations of the United States Department of Agriculture. He has first hand information about some of the billions of little farm hands in the soil, and air, and water that help farmers feed the crops.

He says we may not know it, but those of us who farm are bacteriologists too. We just use a farm instead of a test tube. When we spread barnyard manure on the land; or, lacking that, when we turn under a crop of legumes for green manure, or plant a cover crop in the fall; we do it because we know from experience it enriches the land and helps the crop.

But what really happens is not so simple. Barnyard manure, and green manure, and plant remains or similar substances contain nitrogen. Crops need nitrogen. But they can't use it in the form they find it in that plant refuse. "As is" the nitrogenous compounds are too complex. They must be broken down into something simpler. That is where the tiny forms of life, most of them too small to be seen with the naked eye, come in.

These complex substances, Mr. Smith points out, are broken down into ammonia and carbon dioxide by various rot causing organisms. Ammonia is a comparatively simple nitrogen compound, but crop plants can't use the nitrogen in that form. Another group of invisible farm helpers take hold and oxidize that ammonia in the soil to nitrite. But the crop plants can't use the nitrogen in that form either. A second crew of bacteria take over the job. They finish the oxidation to nitrate. The nitrogen in the form of nitrate is absorbed by the plant roots and built up into the plant into complex substances again.

If legumes are used for soil improvement, as Mr. Smith explains, the story is a little different. In the case of legumes, it is not necessary to

have nitrates in the soil. Billions of bacteria growing in the knots on the roots of legumes take nitrogen gas directly from the air in the soil and give it to the plant.

Mr. Smith says if you grow a non-legume, such as rye, and turn it under, you add no nitrogen to the soil which was not in the soil before you started to grow the rye. However, it is much better to grow rye as a green manure crop than to leave the ground bare. Where heavy rains fall in the winter, the main thing is to prevent soil washing. A cover crop will do that. A cover crop will help hold what nitrates are in the soil. Wheat land, left bare, for instance, loses nitrates by leaching. It also loses other soluble compounds. The cover crop also adds organic matter to the soil, and improves its physical condition.

Speaking of organic matter, Mr. Smith tells me the farther north you go, as a rule, the more organic matter you find in the soil. That, he says, is because the bacteria don't have a long enough growing season to destroy it.

You see, the temperature and moisture have to be right for the bacteria. If the soil is too hot and dry, the invisible farm hands slow down on their job. If the soil gets too cold they also knock off work, and decomposition is delayed. They are most active in the spring and fall.

Soon after decomposition sets in, the bacteria which help make nitrate get busy producing that plant food. But other microorganisms in the soil use nitrate. Until the easily decomposable material has disappeared, the other tiny soil inhabitants use up the nitrate about as fast as it is formed. Then when the bacteria in the soil quit absorbing so much of the nitrate, the nitrates begin to accumulate.

Of course, a substance rich in nitrogen will yield more nitrates through decomposition than one poor in nitrogen. Mr. Smith says that it has been determined that if a substance contains two per cent or more of nitrogen, there will be more than the invisible inhabitants of the soil need for their own use, so nitrates will accumulate in the soil. That fact is of very practical importance to the farmer whose crops need nitrates.

If the substance has less than two per cent of nitrogen in it, there is not enough nitrogen to go around. For instance, in the decomposition of a substance as poor in nitrogen as straw, these microorganisms in the soil need more than they can get from the straw, so they take it from the soil. Unless nitrates are plentiful in the soil, plowing in straw may harm the next crop. That is, it may unless that crop is a legume.

In the case of legumes it is an advantage not to have nitrates already in the soil. Nitrates in the soil interfere with the growth of those nodules on the roots of the legume, and the legume's system of getting nitrogen from the air.

Legumes not only increase the complex nitrogenous compounds in the soil, but Mr. Smith tells me, they seem to have a good effect on the microbes in the soil and upon succeeding crops. Just how that is, the bacteriologists themselves haven't yet found out for certain.

Nevertheless, from what has been said, you see that the lowly microbe often controls the farmer's destiny. Although the microbes are badly fed and treated at times, they don't let up on their special work of preparing food for the higher plants. We feed our cows a balanced ration. We try to make conditions best for them to produce the most. But when it comes to feeding the microorganisms in the soil, through whose activity crop growth is possible, it is often a hit and miss proposition. It must necessarily be so, Mr. Smith says, until more is known of the unseen life of the soil.

In the meantime, such facts as are known should be put into practice that the heritage of soil organic matter may not be wasted, and the farmer reduced to poverty.

The United States Department of Agriculture has a Farmers bulletin which tells about cover crops and green manures; when to use them, when and how to turn under a green-manure crop and many other of the practical questions which farmers are asking themselves at this time of the year.

Ask for the Farmers' Bulletin on "Green Manuring." it is Farmers' Bulletin No. 1250-F. And, as you know, the bacteria which work on one legume will not always work on another. The inoculation of legumes and nonlegumes with nitrogen-fixing and other bacteria is discussed in detail in Farmers' Bulletin No. 1496-F.

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ANNOUNCEMENT: Either one, or both, of those bulletins can be had for the asking. Just write to this Station----- or write direct to the United States Department of Agriculture at Washington, D.C. The bulletin on "Green Manuring" is Farmers' Bulletin No. 1250-F. The bulletin on the inoculation of legumes and non-legumes with nitrogen-fixing bacteria is Farmers' Bulletin No. 1496-F.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Wednesday, July 30, 1930.

NOT FOR PUBLICATION

Speaking Time:

Poultry Interview No. 46: The Poultry and Egg Situation.

ANNOUNCEMENT: Your Farm Reporter at Washington brings us at this time another look into the economic situation of eggs and poultry. He brings it to you as a result of his interview with Mr. B. H. Bennett, of the Bureau of Agricultural Economics of the U.S. Department of Agriculture. All right, Mr. Reporter, let's have the facts.....

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Well, folks, the situation seems to have changed very little in the few weeks since I brought you a previous report. I'm not speaking of current prices, because you know about them better than I do. I'm speaking of the underlying conditions which make prices what they are. Perhaps the less said about what they are, the better. Enough to say that there's a reason.

Naturally the Department of Agriculture gets a lot of inquiries these days, asking why? and how long? and so on. The questions come not only from producers but consumers. You'd think that consumers as a class would greet low prices with open arms and no questions asked. But there seem to be things that they'd like to know, also.

I put some of these common questions to Mr. Bennett. As to the WHY of the situation, most of you folks who produce eggs and poultry know the answer about as well as anybody. On the surface, it's practically as simple as adding two and two and getting four. We add high production to low consumption and the answer is equally as inevitable. We get a surplus, and surplus is ordinarily synonymous with low price.

Beneath the surface, there are a few things that require some explaining. But first, let's take some facts which are fairly obvious. Take the egg situation. Egg production figures speak for themselves.

The first 5 months of 1930 showed the heaviest egg production this country has ever known. Using market receipts as an index to total production, there was an increase of 7 per cent as compared with the first 5 months of 1929. And remember that our production in 1929 was NOT unusually light.

Then here's another statement that needs little explanation. We now have the largest accumulation of eggs in cold storage ever recorded. It surpasses the previous record-breaker of 1927. On July 1 this year there were more than 10,700,000 cases of eggs in storage. This represents an

increase of a million cases or more over June 1. On the first of June more than 9 million cases were in cold storage, as compared to more than 6 million on the same date in 1929 and more than 8 million in 1927.

This is something to think about when you're planning your egg production for next fall and winter.

But in addition to cold storage eggs the holdings of frozen eggs are also much larger. The equivalent of 3,280,000 cases of eggs was held in frozen form on July 1 this year, as compared to 2,422,000 cases on July 1 last year.

These figures should be enough in themselves to explain why prices are low. They explain why when prices dropped in the spring they remained down instead of going up during the summer as they usually do at that time of year. They explain also why there is little prospect of much improvement in the near future.

However, high production has not been our only trouble. For some reason which is not completely clear, consumption decided to go into a slump at the same time that prices were doing the same thing. Obviously this is one of those rare occurences that could hardly be expected. When prices are low you'd expect people to eat more eggs. But they haven't. We consumed about 7 per cent more eggs during the first 5 months of 1929, when prices were reasonably high, than we did during the first 5 months of 1930. During May this year, when the price was very low, total consumption was 15 per cent less than for May of last year. It picked up a little in June, but there seems to be no definite indication as yet of the normal response than is expected of low prices.

Perhaps one of the reasons that consumption has not held up, is that the extremely low prices have not been passed on to the consumer. This is one of the reasons, also, why consumers are interested in the situation as well as producers. Many of them seem to believe that retail prices have not dropped in proportion to farm prices. They believe they are paying more than they should in relation to the price that farmers get.

Probably the main reason for the slump in consumption, however, is the general economic situation in the country. This seems to be the only reasonable explanation. For one thing, let's remember that this situation is not peculiar to eggs. Other products are low in price and at the same time consumption is low. This is an extraordinary condition and it will doubtless pass away with improvement of business conditions generally. For the present, however, it is here---extraordinary or not---and it has not helped matters a bit.

Now, let's see what's happening on the poultry market. From the standpoint of production we find about the same situation as on the egg markets. Sixty-one million pounds of poultry was in storage on June 1 as compared to 41 million at the same time in 1929. This, however, is not a record, the holdings on June 1, 1927, exceeding the 1930 holdings by a few hundred thousand pounds.

Low egg prices last spring resulted in heavy culling and heavy marketing of birds. This is one reason storage holdings are high, and it will doubtless be a good thing in the long run. Another reason is found in the heavy hatch of last spring, which is not such a good thing, from the standpoint of prices.

Those are the bad sides of the present poultry situation. The good side of the situation is that poultry consumption increased about 14 per cent during the first 5 months of 1930 over the same period for 1929. So despite heavy culling and heavy marketing poultry can be said to be in better shape, economically speaking, than eggs.

Now, as to the question: How long is this going to last?----that's something that one can hardly undertake to answer with any accuracy. The answer depends partly upon how poultry raisers adjust their production to meet the situation. It depends to some extent upon consumption; and thus it undoubtedly depends somewhat on general economic conditions. We know that we have a large surplus of eggs. We know that this is why prices are low; and we know that prices will remain low as long as the supply is very much above the demand.

The problem is to bring production and consumption back on a fairly even level. And I'll leave the answer to that one with you. Because, after all, you are the ones who will answer it.

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ANNOUNCEMENT: That was Your Farm Reporter at Washington. He has just brought you a report on the economic situation for eggs and poultry. For further information write to the Bureau of Agricultural Economics, U. S. Department of Agriculture, in Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service

YOUR FARM REPORTER AT WASHINGTON. Thursday, July 31, 1930

POSSIBILITIES OF COOPERATIVE MARKETING:

No. 9. What Cotton Co-ops Have Accomplished; and The Outlook for the Future

ANNOUNCEMENT: We will now go into the ninth of our series of sixteen talks on the possibilities of cooperative marketing. This series comes to us from your farm reporter at Washington. Station ------- presents it in cooperation with the Federal Farm Board, and the United States Department of Agriculture. "By their fruits ye shall know them." What have the various farmers marketing associations really accomplished? It is a different story with different commodities and different parts of the country. Let's start with the cotton crop?

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What have cotton co-ops accomplished?

In spite of the fact, that our big State-wide and regional cotton growers associations have never marketed more than ten per cent of the total cotton crop of this country, Dr. J. S. Hathcock, of the cooperative marketing division of the Federal Farm Board, tells me they have actually accomplished a great deal for cotton growers, both inside and outside the organization.

Dr. Hathcock also pointed out the prospects for cotton co-ops in the immediate future.

Before that, however, he called my attention to conditions ten to fifteen years ago, before we had any of these cotton co-ops. There was some interest in marketing before 1920.

The State and Federal agricultural agencies had set up cotton grading and classing offices to bring home to farmers a better appreciation of the importance of quality production. But before 1920 and 1921, cotton farmers had practically no experience in marketing their product. It was when the bottom dropped out of cotton prices in '20 and '21 that a strong demand sprang up all over the Cotton Belt for growers' organizations to take over the marketing.

There was a general feeling that the old system was to blame for making the decline in prices much worse than supply conditions seemed to warrant. Many growers condemned all cotton traders as speculators, and robbers.

Dr. Hathcock credits our cotton co-ops with having increased the perspective and broadened the horizon of the cotton farmer. The farmer, he says, now has a much more sympathetic grasp of marketing problems than he had ten to fifteen years ago. That broadening has come through actual experience in marketing cotton all the way from the farm to the mill. The co-ops have brought their members closer to the market. Under the old system, the grower's market was usually the local buyer. The other steps to the mill are practically unknown to him.

The cotton co-ops have done more than that. Dr. Hathcock points out that they have actually increased the individual grower's bargaining power by injecting new competition into the market. With the chance to market through the co-op open to them, even the growers who stayed outside have been able to use that as a club over the local buyer's head to make the local market reflect better prices than it would have otherwise.

Still another accomplishment of the co-ops has been in making definite progress in fighting what Dr. Hathcock calls the most iniquitous system in the cotton market. He refers to the unfair practice of hog-round or average-price buying. Growers, he says, have never been paid for cotton on the basis of its actual worth. The value of cotton for its many different uses depends to a large extent on its color and the length of the fiber. The difference in grade or class are based on color and staple length. However, it takes a well-trained cotton grader to distinguish properly the many minute variations in length and shades of difference.

The ordinary local buyer didn't have such training, so instead of trying to distinguish between good and better cotton, he grew into the custom of buying all cotton at a local market at the same average price. It is common knowledge, Dr. Hathcock says, that most growers didn't know there were more than two or three grades of cotton. "Middling" cotton was about all they ever heard of. The local markets were hog-round markets. All growers got the average price. The viciousness of that is that it penalizes the man who uses certified seed and more care and grows better than average cotton, and rewards the man who grows less than average quality. It tends to pull down the quality of American cotton.

The co-ops, however, have sold on a quality basis and paid members according to the quality they produced. As a result, growers inside and out of the co-op have learned that there are a number of grades of cotton of different values. Definite progress has been made toward the breaking of the hog-round system.

Another thing the co-ops have done is to donvince growers that the price of cotton is controlled to a large extent by supply and demand conditions. They have learned they can never hope to fix prices on cotton by virtue of holding movements or by any arbitrary action. Holding for higher prices has proved unsatisfactory. The co-ops have found that they must market in a strictly business-like way to get satisfactory results.

As Dr. Hathcock sees it, the co-ops have done these four big things; First, they have brought growers to a more sympathetic understanding of cotton marketing problems; Second, they have increased the individual grower's bargaining power by bringing new competition into the market; Third, they have made definite progress toward putting cotton buying on a quality

basis; and Fourth, they have led to the abandonment of the old idea of monopoly control of the crop.

Taken by and large, Dr. Hathcock says, the cotton co-ops probably have not made money for their grower members. The outsiders have received the same, or better, prices than members.

He points out, however, that plans have been set up for all cooperative cotton to be sold by one strong, well-financed, marketing organization. With the aid of the Federal Farm Board, the American Cotton Cooperative Association, has been formed to market cotton for the various State-wide and regional cooperative associations. In other words, the State-wide and regional associations will quit competing among themselves and sell through one common agency. Experienced people have been secured to manage the A.C.C.A, and it is expected that it will be able to take its proper place in cotton marketing with the other large cotton marchants.

On the other hand, it has been realized that the centralized co-ops have been too far away from the growers. Steps are being taken to bring the market closer to the members. That will be done by setting up branch offices in the large producing areas for the purpose of keeping in touch with the members and rendering services which heretofore could only be had at long distance.

Generally speaking, Dr. Hathcock declares, the cotton cooperatives of the future must, and will, serve their growers as efficiently and as satisfactorily, and at as reasonable a cost, as do the cotton merchants. In no other way, he insists, can the cooperative continue to get the support of growers and justify their existance.

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ANNOUNCEMENT: This time next week we will have another report on what farmers' cooperative associations have accomplished and the outlook for the future. This series of sixteen talks on the possibilities of cooperative marketing come to you through Station ------- working in cooperation with the Federal Farm Board and the United States Department of Agriculture.

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